THE QUARTERLY JOURNAL OF ECONOMICS

VOL. XXXII MAY, 1918 No. 3.

CONTENTS

CAMBRIDGE, MASS., U. S. A.
HARVARD UNIVERSITY PRESS

LONDON: HUMPHREY MILFORD
OXFORD UNIVERSITY PRESS

1918

The Quarterly Journal of Economics

Published by Harvard University

Books, periodicals, and manuscript to be addressed, EDITORS of QUARTERLY JOURNAL OF ECONOMICS, Cambridge, Mass.

Business letters to be addressed, HARVARD UNIVERSITY PRESS, Randall Hall, Cambridge, Mass. Subscription, $3.00 a year.

CONTENTS FOR NOVEMBER, 1917

CONTENTS FOR FEBRUARY, 1918

THE

QUARTERLY JOURNAL

OF

ECONOMICS

MAY, 1918

HOW TO PROMOTE FOREIGN TRADE[1]

SUMMARY

I. Popular misconceptions concerning foreign trade, 417. — The balance of trade, in general and between particular countries, 419. — Disturbances in trade balances due to the war, 422. — The effectiveness of industry the source and the test of advantage in foreign trade, 425. — II. Four dubious devices for promoting foreign trade: Export bounties, 427. — Reduced transportation rates for export business, 429. — Reduced prices of goods for export, 431. — Discriminating duties in foreign countries in favor of American goods, 435. — III. International relations and American trade policy, 442. — Conclusion, 443.

I

It is strange that trade between nations should play so large a part in fomenting war and warlike spirit. Trade, after all, is the peaceful exchange of goods; the more extended and far-ramifying it is, the more we should expect a trend toward peace and a decline of war. Yet rivalry in foreign trade is a powerful adjunct to the forces making for war. It leads unceasingly not only to aggression and contest, but to suspicion, irritation, diplomatic intrigues and squabbles. Doubtless there is exaggeration in the statement that the struggle for trade is the main and sufficient cause of all modern

[1] An address delivered before the Chamber of Commerce of the United States, at Chicago, April 11, 1918.

wars; other factors are at least equally potent, not least among them the inborn fighting instinct. Indeed, economic rivalry seems often to be an unconscious manifestation of the spirit of pugnacious emulation. Each nation takes a pride in being the first, the victor, in everything — in sport, in art, in letters, in science, in war, and in trade also. We have to deal not with a purely mercenary or material state of mind; it is one of pride and glory, not entirely good, but surely not entirely bad. Whether deemed base or noble, the commercial phase of international emulation has of late contributed less to peace between nations than to war.

Trade rivalry, however, is fomented and embittered by common misconceptions about the relation between foreign trade and general prosperity. Many persons, perhaps most persons, think of foreign trade, and especially of exports, as being of cardinal importance to a nation. They think of the export trade, not perhaps as the one fundamental source of prosperity, but certainly as a peculiarly important one. It is regarded as the test and measure of national gain or profit, the main thing to be striven for by commercial policy. Before considering the really important problems that confront us, I venture to call your attention to the misconceptions involved in this opinion and to the way in which they add to the difficulty of arriving at a sound national policy.

We all know that foreign trade, and more particularly exports to foreign countries, do not enrich the country by the process of bringing in money. We know it, but constantly forget it. No educated man would put forth in so many words the view that it is the balance of trade, or the difference between exports and imports, that signifies for a country's prosperity. But many educated men fall into a way of talking in which this

view is implied. To the man on the street it often seems an obvious and undeniable truth. Whether put forward indirectly, or directly and unequivocally, it is persistent and pervasive.

Now, the one great fact in the normal trade of peaceful times is the extraordinarily small flow of money in the settlement of foreign trade. By "money," of course, in foreign transactions, we mean gold. Though every individual transaction is in terms of money — that is, of gold — and though the aggregate transactions in terms of money are enormous, running into billions and billions, the actual amount of gold that changes hands is insignificant. Very small balances only are settled in specie. By the mechanism of the foreign exchanges, goods are made to pay for goods, just as they are in the mechanism of the domestic exchanges. London used to be the clearing house for the complicated offsets and transfers of international trade, and it was largely through London that the final gold balances were remitted. No doubt we shall see in the future a shift in the center of international payments. It would be rash to predict precisely to what extent they will cease to be settled through London; but there will probably ensue a considerable dispersion of the clearing transactions. Some will doubtless be effected through London, some through New York, some through Paris, some through Berlin; and eventually there will not fail to be interlocking arrangements between these several centers. But in any case, once the world is again settled in the ways of peace, the movement of specie will be insignificant as compared with the total volume of transactions. All this is so familiar that an apology is almost due for restating it.

Needless to say, also, exports pay for the imports. If there be a permanent excess of exports from a coun-

try — a so-called "favorable balance of trade" — it exists simply because there are other things to pay for besides the imported goods, or (in the converse case) other things for which the people of a country have to receive payments than for their exported goods. For the forty years preceding the great war, we had in this country a great excess of exports, year after year; yet we all know there was a very slight inflow of specie. The exports of merchandise were simply the means by which we met sundry other obligations, such as interest on our debts contracted abroad, tourists' expenditures, remittances which newly arrived immigrants made to their relatives in foreign countries, and similar international debit items.

Incidentally I may remark that one of the things most surprising to the economist is the ease and rapidity with which this enormous and complicated mechanism functions in times of peace. It is remarkable that when a country has large obligations of any sort to meet abroad, even though those obligations in each individual transaction involve a necessity of remitting the equivalent of cash, the movement of actual cash is so small that the other main resource, the movement of commodities, seems to take place spontaneously. There are some knotty problems as to the precise steps by which this apparently spontaneous movement of commodities is brought about; but that it is brought about is obvious on the face of the facts. Gold moves very little; exports pay for imports.

One of the most persistent forms which the popular misconception assumes is that of supposing that the balance of trade between one country and a single other country is of significance. Many think that if we buy more from Canadians than we sell to them, our trade with that country is a losing one. If, on the other hand,

we sell more to Canadians than we buy from them, they think it a profitable one. It so happens that our trade with Canada has at one time been supposed to be in this way disadvantageous, and at another time to be advantageous. Half a century ago we bought more from Canadians than we sold to them, and were thought to be thereby losing money. Of late years we have sold to Canadians much more than we have bought of them, and have been thought, conversely, to be making money. The simple fact, familiar enough to persons conversant with international dealings, is that balances of this kind, one way or the other, are settled and disposed of by compensating dealings with other countries. During the earlier period, when we bought more from Canada than we sold, we were enabled to effect our payments through exports to England. These supplied the basis for sterling exchange and served to settle our balances with Canada. In more recent years, precisely the converse operation has taken place. We have sold more to the Canadians than we have bought from them. But the Canadians have sent heavy exports to England, and they have also borrowed heavily in England; and it is their credits in England which have enabled them to pay for the goods which they have bought of us. From South American countries and from the far east we have bought, year in and year out, more than we have sold to them. We have been enabled to pay for the commodities thus bought because of our heavy exports to other countries, chiefly to Europe. The balance of trade between any pair of countries is rarely such as to bring about an equalization of their exports and imports. It is in the grand total of a country's transactions that we find the equalization of imports and exports, or rather the equalization of all of a country's international debts and credits; and it is this broad

equalization which serves to bring about a settlement without the flow of specie.

Incidentally, it may be pointed out that the great war, which has disrupted all international trade and all its mechanism, has brought unique consequences as regards this particular phase of dealings between nations. Although in times of peace the balance of trade between one country and any single other country signifies nothing and does not affect seriously the flow of specie between them, the case has become different under the conditions of the present war, and particularly under the conditions which have developed since our own entry into the war. The balance between each pair of countries *has* come to be of real moment. In times of peace the Americans were able to pay for their heavy imports of coffee from Brazil or raw silk from Japan through credits based on heavy exports of breadstuffs and cotton and copper to European countries. London was the clearing house for these transactions, which were disposed of irrespective of the particular relations of the United States with Brazil and Japan. But all this mechanism is now broken up. Our exports are largely on government account; and we get for them not credits in London upon which we can draw, but the promises to pay (the bonds) of foreign governments, which are tucked away in the United States Treasury vaults, and which for the time being are not available for any financial purpose. We must square accounts in Brazil or Japan or Argentina in some other way. The exports of specie to them takes place almost solely as a result of their special dealings with ourselves. It may assume proportions quite unexpected and possibly embarrassing. But these are war problems, not peace problems; abnormal and temporary, and to be ignored in a consideration of permanent conditions and permanent policy.

It need not be said also that the great war has brought abnormal conditions in other ways. As I have just said, the usual machinery for the equalization and settlement of international payments has broken down. The United States, during the period of our neutrality, did receive great amounts of actual gold, in payment for extraordinary exports. Since our participation in the war, we have arranged to end this inflow of gold once for all, and to accept from our allies their promises to pay. And yet the previous flow of specie, astonishingly great as it was, lasting as it did for a period astonishingly long — for the first three years of the great war — illustrates the principles with which it seems to be in contrast. True, we received unusual amounts of specie; but were we made richer thereby, or more prosperous? The result was higher prices, higher wages, higher cost of living, all the phenomena of inflation, all its attendants of feverish speculation. We should have been better off if we had received not the gold, but the things which we should ordinarily have received in payment for increased exports, namely a heavier volume of imported commodities. Under ordinary conditions we should have received very little specie, but much coffee, sugar, spices, wool, tin, jute, sisal; doubtless also more of finished manufactured goods, such as cottons, woolens, linens, and silks. It is the abundance of these commodities which signifies true prosperity. The influx of gold resulted simply in the cheapening of gold, that is, in a general rise of prices. It supplied the basis for an extension of credit which inaugurated the too familiar conditions of inflation. These have been accentuated since our own participation in the war; they still are stimulated largely by the great fund of specie which had come in before.

But, to repeat, these are abnormal conditions. Whatever the course and duration of the war, whatever the changed conditions of international trade which will ensue after peace, we must expect an eventual return to the normal conditions of peaceful trade. It is conceivable that a redistribution of specie among the different nations of the world will take place during the first year or two after peace; but, as before, the mechanism of foreign exchanges will again be at work, the flow of specie will be reduced to a minimum, exports will pay for imports. And it is obvious that in our consideration of the foreign trade of future years, we must have in mind these eventual conditions of peaceful exchange.

One further word on this general subject. The labor and capital which we put into our exported commodities serve to procure for us the imported commodities. That labor and that capital may be said with perfect accuracy to *produce* the imported commodities. In the same way, the labor which the Dakota farmers put into wheat growing procures for them, and may be said to produce for them, the shoes, iron, and sugar which they buy from New England and Pennsylvania and Colorado; and the labor which the New England operatives put into manufacturing boots and textiles procures for them — may be said to produce for them — the wheat and flour which they buy. The prosperity of any one geographical group depends both upon its turning out a large quantity of the immediate products of labor and upon its exchanging those products for other products. Our foreign trade, our combined imports and exports, promote our prosperity as a people if we produce effectively and cheaply commodities which we export, and if we also exchange those exported commodities on advantageous terms for the imports. It is the first-named factor which is the more important: the gain which we

secure from our foreign trade depends chiefly on the effectiveness with which we apply our labor to produce exports.

Now to this general proposition I would invite attention somewhat more carefully because on it hinges what I shall say presently concerning the way in which we should shape our commercial policy. Our foreign trade promotes our prosperity if we make our exported goods effectively and cheaply. The fundamental factor is the *effectiveness* of our labor and capital, and the cheapness with which we can consequently put our commodities at the disposal of foreign purchasers. By cheapness is meant, cheapness all things considered; quality as well as quantity, good quality as well as moderate price; or, if the price seem high, quality so good as to make the high price worth while. Sometimes the needs of other people are satisfied by giving them large quantities of goods of poor quality at a low price; and a considerable part of the export trade of England and Germany is secured in this way. The exports from the United States have usually been good rather than cheap — not so much low in price, as good in quality and moderate in price. But in any case it is the effectiveness of our industrial powers in producing a thing which is cheap in comparison with its quality, that underlies all prosperous foreign trade. The very existence and maintenance of exports rest on this basis. All trade promotion, all banking and transportation facilities, all the trade agents and embassies, all the agitation, all patriotic devotion, avail nothing if this fundamental factor be lacking.

The *effectiveness* of labor and capital means something different from that which is usually implied by the word " efficiency." " Efficiency," as that term is often used, refers to special and individual skill, intelligence,

and activity on the part of the individual workman, to his mental endowment or personal aptitudes or muscular strength. Now, it is true that the high standard of living and the greater spirit of activity in this country do bring it about that our workmen are, man for man, more efficient than those of foreign countries. But it is not solely, or even primarily, efficiency in this limited sense that I have in mind when speaking of the effectiveness of our labor and capital. I refer to the cumulative influence of *all* the factors which combine to bring about the final production and final putting on the market of the exported commodities. The factors are many and diverse: not only the individual efficiency of the men, but ingenuity on the part of inventors and engineers in perfecting machinery, skill in the designing and organization of plants, brains and enterprise in management, intelligence in the distribution and sale of the goods. No small part is played by transportation and especially by inland transportation. Whatever may be charged against our railways, they have succeeded in cheapening transportation immensely, especially in long-distance hauls, and they have been a powerful factor in increasing the effectiveness of the total labor of the industrial processes. And, throughout, the thing which probably tells most of all in assuring a combined effectiveness of our labor and capital is industrial leadership. It is this which has made the modern economic world; it is this which justifies business and the profits of business. I need not say that this means also leadership in service. Successful leadership implies as its end and purpose, not money making, but service in promoting the effectiveness of industry. That the spirit of successful leadership is the spirit of service has never been more fully demonstrated than during this, the first year of our participation in the war. The business leaders have

recognized their responsibilities and taken advantage of their opportunities. They have put themselves at the service of the government and have served without stint in the conduct of its affairs. Money making is evidence of capacity to do service; true success, whether in war or peace, is the rendering of the service.

II

We shall come nearer to the heart of the matter, when we pass from these generalities to some things more concrete and, more particularly, to some conclusions which follow from these simple and incontestable general principles. Let us consider some devices for promoting foreign trade which in the light of these principles appear dubious. They appear dubious because not consistent with the fundamental principle of effectiveness. They are not indeed to be condemned offhand; but they call for critical examination, for careful discrimination, perhaps for rejection.

First of all, and most dubious of all, are export bounties — bounties paid directly by governments upon the export of commodities. These are, on the face of it, a confession of lack of effectiveness. They mean that the commodities cannot be exported upon their merits. True, they may mean low price in the sale of the commodities, since the exporter makes up for a price in itself unprofitable by the bounty paid him. But that very circumstance indicates that the sales do not mean low cost or, what amounts to the same thing, they do not mean high effectiveness. The bounties do not really cheapen your goods in the important sense of cheapness; they mean that a payment from the public purse makes up for a lack of effectiveness. Remember that, in the last analysis, the labor which procures im-

ports is the labor which serves to produce your exports. If an export bounty is paid, you must reckon as part of the total cost of your exports not merely the labor directly applied to them, but also that which is involved in the export bounty. The money for the export bounty comes out of taxes; and taxes mean that a part of the community's labor is turned by the government into the channels for which its payments are made. In addition to the labor needed for producing the exports, we must reckon the labor involved in paying the bounty. A country simply deceives itself when thinking that it gains by this process.

Only if we accept the old and long discarded notion that any foreign sale whatever is profitable, can we conceive of export bounties as being advantageous to a nation. If, indeed, we take the view that an export sale in itself necessarily constitutes a profit; if we are so ill-informed as to think that the gold actually flows in for every item of exported goods, and so ill-advised as to believe that an unending inflow of gold makes a country unendingly prosperous, then indeed we may think that export bounties promote fundamental prosperity. But the fallaciousness of this way of looking at the matter does not need to be dwelt upon. The exports signify not gold or riches, but imported goods got in exchange; and if in the payment for those imported goods we also tax ourselves in order to pay a bounty, we lose so much of the real gain from foreign trade.

It is fair to say that direct public bounties upon exports have virtually ceased. The most striking instance of their payment upon a large scale was in the bounties upon the export of beet sugar which were paid for some twenty years preceding 1903 by various continental countries. All these countries sinned, and all of them

became in due time thoroughly repentant. The senseless rivalry in bounty paying upon exportation of beet sugar went so far as to make serious inroads upon the public exchequers of several countries, and it was a real relief to them when Great Britain in 1903, by refusing to remain longer the one country into which bounty-fed sugar could be dumped upon a considerable scale, put an end to the whole business.

The second dubious device, and one in which the problems are more difficult and complicated, is that of special transportation rates for export business. To simplify the question of principle here involved, and strip it of the political and naval problems that are connected with ocean transportation and the merchant marine, let us confine the discussion to rates for inland transportation. Railroad rates constitute the most conspicuous and the most debatable problem. It must be admitted that most governments do in fact follow the practice of allowing special railroad rates for export business; not only Germany and France and the countries of the Continent generally, but the United States also. Our inland rates to the seaboard on various commodities are lower for export business than for purely domestic business. The Germans are often roundly accused of making reprehensible use of this device. It must not be forgotten that we have done the same under private management of railways, and that our governing authority, the Interstate Commerce Commission, has repeatedly sanctioned the practice.

It is obvious that if a railroad were to transport for nothing — if it were to *give away* the transportation once for all — the case would be the same as that of an export bounty. The article so transported, could indeed be sold abroad at a comparatively low price. But that low price would not be a sign or a consequence of

effectiveness in production; for there would not be included in the price a real and important element of actual cost, namely the transportation expense. In such a case we should not be exporting at really low cost; we should be concealing a substantially higher cost. The item of railroad transportation would not be obliterated or saved, but would be simply paid for in some other way. It would be made up either by the railroads themselves out of their general profits, or by the domestic shippers and consumers through higher rates upon domestic business, or by a combination of these processes.

If, now, transportation is not given away outright, but is offered at reduced rates on export business, the case seems to be in essence the same, only not to proceed quite so far. To the extent to which the process of reduction or favoritism is carried there is a concealment of real cost. Consider the several elements of the situation. The export rate is lower than the domestic rate. But that domestic rate itself may be presumed to be reasonable, that is, reasonable in view of cost of carriage, and based principally on cost of carriage. All our regulatory legislation, our Interstate Commerce Commission, all our state commissions, are established to insure the carriage of traffic at reasonable and proper rates; and reasonable and proper rates are such as conform upon the whole to cost of carriage. If, now, the domestic rate is reasonable, and the export rate is lower than the domestic rate, the export rate will seem necessarily to be *less* than cost of carriage. Such a special export becomes a device for artificially forcing the exports, and is essentially like a bounty; it means sham effectiveness, not real effectiveness.

It must be admitted at once that this is by no means everything that can be said on the problem of railway rates on export business. The railway rate problem is

highly complicated. Every student of the relation of rates to cost of carriage knows that cost is almost impossible to allocate with exactness. "Reasonable rates" are extremely difficult to fix with precision. Even though a general average be arrived at which is in right relation to cost of carriage, the determination of such an average does not necessarily lead to the corollary that each individual rate can or should be similarly fixed in direct relation to cost of carriage for the individual item of traffic. Special rates are often justified by special traffic conditions. Special rates upon export traffic may be justified in view of special conditions. But it would seem that they should be granted only in the same way and on the same principles as any other special rates — perhaps in view of unusual competition by alternative routes, perhaps in view of the utilization of equipment otherwise idle. They should not be granted simply and solely on the ground of export destination. Here, too, we must not delude ourselves with the belief that the mere fact of export, not based upon a real effectiveness in producing and transporting and marketing the exported commodities, brings a special gain to the country. If indeed we believe that any and every kind of export is in itself desirable, that it necessarily brings of itself a net gain to the country, then and then only we shall be prepared to admit, as in the case of direct bounties, that special transportation rates for export are in themselves desirable. But that hoary fallacy we have rejected. Special export rates are open to suspicion on the same ground that export bounties are open to suspicion; the case for them must be affirmatively established, like that for every special rate in every branch of railway transportation.

Turn now to a third device, also questionable. What is to be said of special prices made by the producers for

export business — lower prices than are asked and expected on strictly domestic sales? Are they good, and are they to be encouraged?

Now, on the face of it, lower prices for exported goods than for the identical goods sold in the domestic market seem open to the same objections as transportation favors and seem equally dubious. Here too, let us fasten attention to special prices resting solely upon the fact of export destination, just as, in the case of railways, attention was directed to railway rates made solely in consideration of export movement. We seem to be confronted by a similar dilemma. If the export price is specially low, the domestic price must be made specially high, and (it would seem) must be unreasonably high. If the export price is lower than would be warranted by real effectiveness, the domestic price must be higher than is warranted by real effectiveness. If the export sales are at less than cost, domestic sales must be at more than cost.

This dilemma is most often stated, and most effectively stated, in cases where there is monopoly or something close to monopoly. Suppose that a single concern has control of a given product or set of products; it will often sell in one market at a cheaper rate than in another market. A glaring instance, laid bare by repeated public investigations, was that of the policy which the Standard Oil combination followed in its domestic transactions; it sold in some domestic markets at lower prices than in other domestic markets. Now, if the price in the favored market was sufficient and reasonable, *ipso facto* the price in the non-favored market was more than reasonable. Similarly, if an export price is in itself sufficient and reasonable and in right accord with cost, then the domestic price, if greater, must necessarily be unreasonably high and in excess of

cost. If, on the other hand, the lower price to foreigners is in itself not enough to cover costs, then the domestic price must in the long run cover the difference; the domestic price must be too high. And in this latter case the exports, if made at prices which do not in the long run really cover costs, are based not upon real effectiveness of industry, but upon concealment of real cost, precisely as in the case of export bounties. The argument is that the practice either involves undue prices to the domestic consumer, or else a sham of effectiveness in producing the exported article, not real effectiveness.

Here again, as in the case of railway rates, this mode of dealing with the problem may not probe it to the bottom. If railway rates are highly complicated, some problems of price and of cost in relation to price are almost equally complicated in any large-scale industry. The situation is far from simple; it raises all the questions of fixed charges, of overhead expenses, of cost accounting and the allocation of costs, of business policies in the face of fluctuating demand, of the ways of meeting alternate cycles of activity and depression, of security and continuity in industrial operations. It raises, too, the question of the difference between a sporadic and a systematic application of special export prices. In the early stage of export trade, special allowances on exports may be part of an effective policy of merchandising. Practices of this kind tend to become less widely applied in the later stage of fully developed and continuous export business. There are here unsettled questions not only of economic analysis, but also of sound business policy and of effective industrial leadership.

But, when all is said, it would still seem that practices of this sort, namely, special rates upon export trade,

must be on the defensive. It needs to be proved that they are really advantageous to the community. At first sight they appear to be disadvantageous — to mean not real effectiveness of industry, but concealment of a cost or burden actually incurred in the export part of a business, yet borne not by that part but by the rest of the business or by the community at large. And here once more let us not fall, as involuntarily we do, into the deceitful belief, or perhaps the flattering unction, that the sending of goods abroad is in itself a thing which brings money into the country and thereby makes us all more prosperous. Let us hold fast to the fundamental principle that the exports are the means of producing the imports, and that only if there be real effectiveness, real success in the application of our labor and capital, does the country gain.

In all discussions of special export prices and of dumping, a distinction must be borne in mind between sporadic and permanent transactions — between occasional sales at special prices and a permanent policy of lowered prices for export. No one questions that conditions may arise at times in any business venture which will compel the disposal of a block of commodities at any price they will fetch when thrown upon the market. These are not pleasant or welcome conditions, but they must be faced as sometimes inevitable. It is quite a different matter, however, to sell permanently and systematically one part of your output at a different price from the rest of your output. To put it another way, it is more than questionable whether overhead, or general expenses, should be permanently distributed in such a way that any part of the sales will be made without consideration of this burden, or without due consideration of it. In the long run, and as a matter of permanent policy, every part and parcel of the output should

bear its due share of the total cost of bringing it to market. If in the long run it does not so bear its due share — if it is sold in such a way that the overhead or general expense is not properly debited against it — then sooner or later the rest of the output must bear *more* than its due share of the general expense. The overhead must necessarily be paid for somehow. No part of a business really pays which fails to pay its proportionate share of the expenses of conducting it. This is no less true of foreign trade than of domestic trade; no less true for the country at large than for a separate business. Sales may be made occasionally without regard to general cost, and even with little regard to the direct or specific expenses entailed for the particular items. But in the long run, and as a permanent policy, sacrifice sales and special price sales are not profitable to the individual business, and are not profitable to the nation. In our discussions of foreign trade and of foreign trade policy it is the permanent conditions and the long run results which we must primarily bear in mind. The continuous and successful expansion of foreign trade must rest not upon sporadic or occasional transactions, but upon those which can be continued with advantage year after year, and on essentially the same basis year after year.

Fourth and last, is a dubious device of a different sort: special concessions in foreign countries, in the form of lower rates of duty on our goods when exported to those countries. Shall we try to arrange commercial treaties or reciprocity agreements on the basis of assuring to American commodities, when they reach the foreign custom house, lower rates of duty than are exacted on the same commodities when imported from third countries? To simplify this case also, let us set aside any arrangements which are based on particularly

close political ties or on geographical contiguity. We have at present, for example, arrangements with Cuba by which American commodities are admitted into Cuba at lower rates of duty than commodities from other countries. These arrangements have a political as well as an economic aspect. They were introduced and justified largely upon political grounds, indeed quasi-sentimental grounds, namely, the close affiliation between this country and Cuba which was the result of our intervention in freeing Cuba from Spain. Let us set aside, also, cases in which an extended frontier leads to special freedom from duties and justifies that freedom. Such a relation exists between Portugal and Spain, or, to come nearer home, between the United States and Canada. Our frontier is contiguous to that of Canada over many thousands of miles and the facilities for convenient border trade at many points would readily justify our entering into special commercial relations with Canada. We had such relations in the past, under the reciprocity treaty of 1854, and on our statute books we still have the reciprocity act passed in 1911, offering freedom from duty for a considerable list of articles on condition that Canada grant to our commodities a like freedom. That offer we still hold open. Cases of this kind — our relations with Cuba and Canada — present some problems of their own, to be dealt with on grounds of their own. The question of principle may be weighed quite on its economic merits, by examining a special arrangement where there are no such complications or, rather, no such simplifications. Consider, for instance, the arrangement which we now have with Brazil whereby certain American commodities are admitted into that country at lower rates than are imposed upon the same commodities when they reach Brazil from other countries.

Here again the test of real effectiveness may be applied. Special favors in Brazil may enable us to sell our exports to Brazil; but they do not cause us to be really effective in serving either the Brazilians or ourselves. If our exporters cannot do the business without the discriminating rates — if they cannot sell in Brazil without such aid — then the exporters of other countries are obviously more effective in serving them. Our exporters then are bolstered up, not indeed at the expense of our domestic customers or of our own treasury, as in the case of export bounties or of special transportation rates, but at the expense of the Brazilian consumers. Their lack of real effectiveness is made up by the exclusion of the more effective competitors. It is once more a case not of real effectiveness but of sham effectiveness.

Once more, let me not be misunderstood. Ties of friendship and of friendly political affiliation may lead to special reciprocity rates or to special trade agreements, regardless of direct material benefit to one party or the other. Of this our relations with Cuba give a striking example. But the governing conditions of trade in the world at large are not of this sort. Trade in the main has been and will be a matter of material advantage. In the main we must export on the same terms and on the same conditions as our rivals. If we secure special favors, we can justify them only on the ground that the countries which grant them are willing to make a sacrifice for the sake of carrying on a trade which is not in itself the most advantageous for them. In the long run we cannot expect them to do other than to maintain the most advantageous trade. In other words, in the long run we must rely upon real effectiveness and upon real service, not upon special favors or discriminating rates of duty. That which is advanta-

geous in our own domestic transactions, namely, the maximum effectiveness of labor and capital in production, is also advantageous in our foreign trade, both to ourselves and to countries with whom we trade. Here is the only source of real benefit to all concerned, the only secure basis of a continuing export trade. All favors, all discriminations, all special rights, all promotion and advertising, sink into insignificance as compared with this fundamental factor. To make our export trade enriching and of real national profit, we must so organize and conduct our industries that we shall make goods plentifully and cheaply, and we must sell our goods on their merits and on tempting terms, to every customer at the same price.

To take this position is by no means the same thing as to adopt a policy of *laissez faire* in foreign trade; neither does it imply any commitment one way or the other on the question of protection and free trade. It does imply a policy of non-discrimination, or at least one of resolvedness neither to discriminate nor to be discriminated against. The United States must hold itself free to adopt such tariff policy as seems suited to its own interests. It must leave to other countries the same freedom. But whatever tariff system we adopt, we should aim to apply it without discrimination to all comers; and whatever system another country adopts we should wish that country to apply to ourselves on the same terms and in the same way as to others. The essential principle in the general attitude which I here suggest is that of non-discrimination.

It is conceivable that a policy of this sort cannot be carried out to the full. Indeed, it is certain that it cannot be successfully carried out by merely proclaiming it, or by merely expressing our wish to abide by it. Other countries may adopt tariff legislation which dis-

criminates against the United States. Should they do so, we must be prepared to apply pressure to them, and in case of need to discriminate against them. We now possess virtually nothing in the nature of a bargaining weapon. Something of the sort is indispensable. We should have provisions on the statute books enabling the administration to meet discrimination by discrimination, force by force. We should be able to say to other countries which refuse to grant us terms as favorable as their terms to third nations, that we shall in turn subject them to unfavorable or discriminating rates. But our purpose in securing and exercising this should be not that of putting discriminations into effect, but that of removing them. The goal, to repeat, should be the open door, the same treatment for all.

To sum up: the four devices for promoting export trade considered in the preceding discussion are first, export bounties; second, special transportation rates on export traffic; third, special reduced prices on commodities sold for export; and finally, lower duties on American goods in foreign countries, secured by negotiation or treaty. Among these the first and the fourth — export bounties and duties discriminating in our favor — are the most dubious of all. The second and third — special transportation rates and special export prices — though they raise intricate questions and are not so clearly out of accord with sound policy, nevertheless have a presumption against them. In all four cases we should at the least pause, and inquire with a fair and open mind whether these several methods of action really conduce to the prosperity of the United States or the prosperity of nations.

Not only, however, are such devices dubious, sometimes even clearly bad; but they are constant causes of misunderstanding, suspicion, recrimination, interna-

tional friction. They arouse irritation most of all when they are concealed, or supposed to be concealed. Like many another aggressive act, they stir resentment most sharply when they are furtive.

It is not difficult to adduce cases where there has been concealed or furtive resort to one or another of these devices. One instance of the kind has already been referred to, namely, the much-discussed export bounties on beet sugar from the continent of Europe. They had their origin in a drawback payment which was supposed to be merely the equivalent of an internal or excise tax, but which in fact developed into a drawback because in excess of the excise actually collected. A similar case has more recently been the occasion of a ruling by our own Treasury Department. Certain drawback payments were made by Germany on the export of grain and flour, based not upon the exportation of the identical materials on which the taxes had been paid (in this case import duties) but upon the exportation of equivalent amounts irrespective of identity. Our Treasury Department felt compelled to rule that a virtual bounty upon export had been paid — not necessarily with deliberate intention, but with substantially the outcome of a bounty payment. Cases of this kind are precisely of the sort to arouse suspicion of an intent to circumvent a competitor which does not appear upon the face of the proceeding. The same is true of the preferential transportation rates. True, they may rest on a really sound railway policy; they may be occasioned, for example, by competitive route conditions such as are universally recognized, both in the policies of privately owned and of publicly owned railways, as justifying special rates. Nevertheless, when granted to export traffic, the suspicion always arises that they rest not honestly upon a sound basis of this sort, but upon something different

and dubious. They are believed to evince an endeavor to outwit and circumvent, by hook or by crook, the foreign competitor.

One further case in which misunderstanding and suspicion arise deserves to be noted. The mode in which international arrangements for favors in the way of import duties are brought about may be the cause of irritation on the part of rival countries. An arrangement is now in force between the United States and Brazil, by which some American commodities are admitted into Brazil on the payment of duties lower than those applicable to commodities from other countries. We now possess in Brazil the advantage of duties discriminating in our favor. This arrangement, however, rests officially and formally upon no treaty or commercial agreement, but on the voluntary act of Brazil. So far as appears upon the official record, that country, out of spontaneous friendliness for the United States, voluntarily grants us the discriminating duties. Yet anyone conversant with the history of our dealings with Brazil knows that the arrangement goes back to a preceding period of negotiations and treaties in which we asked urgently for favors of the same sort. Whatever the formal record, it is not supposed by any open-minded and well-informed person that the favors were granted without persuasion by our diplomatic representatives. Certain it is that they are supposed by other countries to have had such a basis and such an origin. We possess advantages, but do not come into the open and let it be known in what manner or by what sort of persuasion we have succeeded in securing them. Our position, at best not easily defended, is the more open to attack because believed to be not entirely straightforward.

III

I pass now to some considerations of a more general sort. What is our present attitude in the international sphere? All relations between nations are in the melting pot. The great war has opened a new era. We cannot separate our industrial and trade policy from our political and military policy. Whatever attitude we take toward the world in the larger phases of international politics must be reflected in our policy with regard to foreign trade.

One common attitude should lead us to pause and reflect. We are often told of America's opportunity, of the opening made for American trade and American exports by the ousting of the Germans and the crippling of the European countries which are our allies. We have a chance to establish ourselves, it is said. Let us oust our rivals, push our trade, get a firm footing, hold our gains after the war.

Much of the language used in this connection has not a pleasant or a generous sound. It suggests a spirit of rejoicing at a chance to hit one's rival when he is down. We are urged to take advantage of the misfortune and weakness of others, and to establish ourselves in their places in such a way as to prevent them from having any opportunity thereafter. We much resent such an attitude when we suspect it in the case of another country. Should we not sedulously refrain from manifesting an ungenerous attitude ourselves?

The war beyond doubt will alter seriously the old currents of trade. The force of habit is strong in commerce between nations as it is in commerce within a country. Many trade arrangements of the past have maintained themselves largely by inertia. The war necessarily brings a shock, and makes new combinations possible.

The situation is not dissimilar in our import trade. There too the war has precipitated a change. Some commodities formerly imported into the United States may never be imported again. In consequence of the cessation of imports, goods formerly imported have been made by domestic producers who may hold their own, even without any changes in our import duties, when peace has once been restored. As regards exports also, it will probably turn out that some commodities of which the foreign sale has been suddenly and even dramatically stimulated by war conditions, will continue to be exported after the restoration of peace. All the ties and traditions of former times have been broken. The opportunity is open to all; the field is free. But let us enter it as a free and open field, and not endeavor to make it a closed field of our own. Let us rest our forward endeavors not upon the misfortunes or weaknesses of others, but on our own inherent strength. Let us ask no favors, let us use no unfair or deceptive devices. Let our true strength be revealed, not our weaknesses concealed and overcome by artifice.

Our general attitude in international affairs has been stated in eloquent words and in a noble spirit by President Wilson. Repeatedly and unequivocally he has announced to the world that we have entered the war with no selfish aim. We desire no territorial acquisitions, no industrial favors. We are fighting for ideals. We have unsheathed the sword reluctantly, and only because sadly convinced that the world is not safe unless infused with a new spirit and readjusted to a safe order. Our strength before the bar of the world's public opinion rests upon the unselfishness of our policies. We are fighting not for ourselves, but for humanity.

These reflections on our general attitude, combined with a rational conception of the significance of foreign

trade and of the best ways of promoting it, lead finally to two fundamental conclusions. First, we should cultivate in our domestic policy and in the ordering of our own industrial conditions the spirit of effectiveness in industry. Second, we should cultivate in our international arrangements the spirit and the letter of the open door.

First, we should rest competition in the international field on the *effectiveness* of our industries. In the plain every day work of the industrial sphere, as well as in the higher levels of international politics, we should stand for an open and honorable rivalry. The extension of our export trade should be based upon effectivness in service — on well-paid labor well applied, and on serviceable goods produced cheaply and offered to all comers on the same terms. Our international trade, like our international polity, rests on a sound basis only if it conduces to the advantage of others as well as to ourselves. We shall exchange goods profitably with other countries if the profit and the benefit of others is no less than our own. And this result is achieved, to repeat once more, not by bounties, not by special prices, not by overt or furtive discriminations in our favor, but by the plain and fundamental fact of doing our work well and doing a service to others. The keynote of our foreign trade policy should be effectiveness in industry, service to all.

Second, our international policy should be frank and open, and in commercial matters that of the open door. The open door policy, it need hardly be said, means that we wish no special favors for ourselves, and oppose special favors to others. We have adopted it and followed it unflaggingly and without qualification in the far east. There we have maintained that the United States and other nations should all stand upon the same

footing in economic and financial competition. We believe that all negotiation should be simple and straightforward, and that the outcome should be the establishment of the same terms for everyone. We wish a fair field, an honorable rivalry. It is our pride that in the Orient we have nothing to conceal, nothing to explain, nothing to apologize for. Our policy in the Occident should be no less the cause for a just pride. We wish for no discriminations in our own favor, we are opposed to discriminations in favor of others. We stand for open dealing, open diplomacy, open commerce. Our democracy is idealistic; our international aims are idealistic; our trade policy should no less rest upon ideals.

F. W. Taussig.

Harvard University.

RECENT RAILROAD FAILURES AND REORGANIZATIONS

SUMMARY

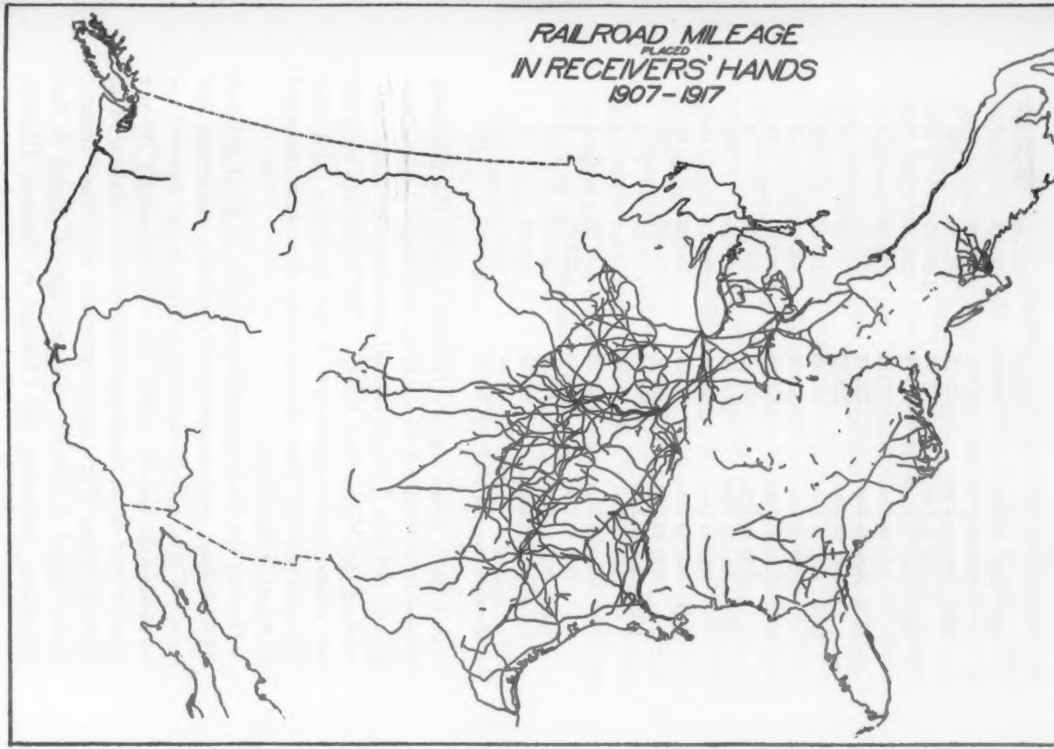
Number of miles placed in receivers' hands, 1907–17, 446. — List of principal companies which failed, 449. — Causes of failure, 454. — General nature of reorganizations, 462. — Provision for cash requirements, 466. — Reduction in fixed charges, 467. — Volume of capitalization before and after reorganization, 469. — Changes in rates of interest on outstanding bonds, 470. — Analysis of capitalization, 472. — The use of income bonds, 473. — Treatment of outstanding preferred stock, 476. — Treatment of general mortgage bonds, 481. — Conclusion, 483.

I

During the period from January, 1907, to December, 1917, some 59,846 lines of railroad in the United States were placed in receivers' hands. The capitalization of this mileage amounted to $3,735,499,496, or a sum equal to more than three times the national debt of the United States before the present war. Indeed, as late as December, 1916, between one-seventh and one-eighth of all the railroad mileage of the country was in charge of the courts.

For convenient reference the mileage of railroads placed in receivers' hands during the last ten years may be tabulated as shown on page 448.

Geographically the bankruptcies were concentrated in the central portions of the country. No important railroad in Trunk Line territory went to the wall, none in the northwest, nor, with the exception of the Seaboard Air Line, was there any important failure in the old South. The accompanying map presents these facts in more detail.



RAILROAD MILEAGE PLACED IN RECEIVERS' HANDS 1907-1917

		Mileage Owned	Mileage Operated	Number of operating companies
1907	Jan. to June.....	206.57	213.11	6
	July to Dec.	142.89	131.89	4
1908	Jan. to June.....	6,910.85	7,417.70	25
	July to Dec.	907.36	1,009.43	8
1909	Jan. to June.....	742.21	723.27	7
	July to Dec.	360.77	341.15	5
1910	Jan. to June.....	284.46	835.39	9
	July to Dec.	298.27	52.95	5
1911	Jan. to June.....	176.10	163.95	8
	July to Dec.	2,022.84	2,563.93	4
1912	Jan. to June.....	3,373.98	4,004.40	14
	July to Dec.	606.81	689.27	4
1913	Jan. to June.....	5,026.63	6,344.78	12
	July to Dec.	2,253.66	2,614.77	16
1914	Jan. to June.....	621.07	753.28	10
	July to Dec.	3,269.86	3,404.00	15
1915	Jan. to June.....	9,065.35	10,281.93	4
	July to Dec.	11,124.34	11,254.12	9
1916	Jan. to June.....	47.00	47.00	4
	July to Dec.	2,603.45	4,304.39	5
1917	Jan. to June.....	2,046.88	2,056.46	12
	July to Dec.	637.75	639.10	8
Total to Dec. 31, 1917..		52,729.10	59,846.27	194

Generally speaking, the failures were in the intensely competitive territory of the Central Freight Association, and in the less densely settled sections west and southwest of the Mississippi River. The south and east did not repeat their experience of the Nineties, while the transcontinental lines in the main this time managed to weather the storm.

During the whole period the number of great systems which failed was comparatively small. Although one hundred and ninety-four companies in all entered receivership in eleven years, yet approximately 53 per cent of the total bankrupt mileage was embraced in three systems or groups of systems: first, the Chicago, Rock Island & Pacific; second, the St. Louis & San Francisco, including the Chicago & Eastern Illinois;

third, the companies which at one time or another were combined under the leadership of Mr. Gould. The great outstanding facts of the period were, indeed, the inability of Mr. Gould to hold his transcontinental system together, and the separation and eventual collapse of the railroads at one time centralized under the financial management of the Moores and of Messrs. Reid and Yoakum, working through the Rock Island Company.

In order to get before us more fully the circumstances of the period so far as railroad failures are concerned, certain information will be given, relating not only to the three groups mentioned but to other important companies as well.

The following list of railroads includes all those failing between January, 1907, and December, 1917, which operated a mileage of over 500 miles. This list will form the basis of our detailed discussion:

Name of railroad	Mileage operated	Receiver appointed	
Seaboard Air Line	2,998	January	1908
Chicago Great Western	818	January	1908
International & Great Northern	1,160	February	1908
Western Maryland	543	March	1908
Wheeling & Lake Erie	504	June	1908
Norfolk & Southern	582	July	1908
Atlanta, Birmingham & Atlantic	641	January	1909
Wabash	2,515	December	1911
Kansas, Mexico & Orient	634	March	1912
Pere Marquette	2,330	April	1912
Chicago & Eastern Illinois	1,275	May	1913
St. Louis & San Francisco	6,042	May–July	1913
Cincinnati, Hamilton & Dayton	655	July	1914
International & Great Northern	1,160	August	1914
Western Pacific	946	March	1915
Chicago, Rock Island & Pacific	8,602	April	1915
Missouri Pacific	7,043	August	1915
Missouri, Kansas & Texas	3,621	September	1915
Boston & Maine	2,298	August	1916
Texas & Pacific	1,944	October	1916
Kansas City, Mexico & Orient	951	April	1917
Total	47,262		

Taken as a whole this is a distinctly weak group. Without going into details for each railroad included in it, the general statement may be made that the credit of no single system except that of the Boston & Maine was better than second class. In some cases, tho not in all, the capitalization per mile was high, and the fixed charges correspondingly great. In the majority of cases earnings per mile were below the average for the country or for the section in which the mileage lay, while expenses were not markedly inferior to this average. Two railroads, the Pere Marquette and the Seaboard Air Line, had recently been subject to receivership or reorganization. In the case of a number of others the management might properly be called speculative. This was particularly true in the case of the Rock Island and the St. Louis & San Francisco companies, but the whole Gould system was subject in a measure to the same reproach. Generally speaking, the percentage of fixed charges to net income was exceedingly high, especially in the later years of the period, and this was both a result and a cause of the low price obtained for new securities sold. Yet operating ratios were also high and increasing.

The first railroad of the group which failed was the Seaboard Air Line Railway, in January, 1908. The Seaboard Air Line was a company of some 2500 miles, connecting Richmond, Virginia, with Wilmington, Savannah, Atlanta, and Montgomery. It had been organized in 1900 as a consolidation of a number of separate companies, but seems never to have been profitable. In part this was due to competition, and to the general low density of traffic in southern territory, but in part also to inadequate equipment, more or less demoralized organization, and consequent high operating expense. For a number of years before 1908 operating ratios

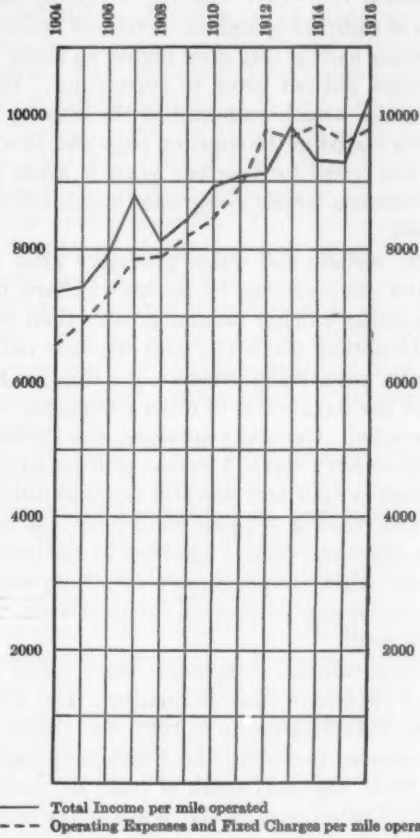
ranged from 66 per cent to 79 per cent. The company's credit suffered also from a series of bitter disputes between Mr. John Skelton Williams, who had created the system, but who later was forced to retire, and a group of New York financiers who succeeded him. In 1904 backers of the company were compelled to organize a holding corporation in order to raise funds to pay Seaboard Air Line floating debts. In 1907 Seaboard Air Line earnings and income dropped below expenses, and in January, 1908, with declining revenue, and unable to market its securities, the company was obliged to suspend. Its total earnings for the year ending June 30, 1908, were $16,810,514, and its expenses, including fixed charges, were $18,100,703.

The second large failure was that of the International & Great Northern Railroad. This company had been skirting the edge of bankruptcy for years. In 1904, 1905, and 1906 it had earned less than enough to meet operating expenses and fixed charges, and in but one year between 1898 and 1907 had it secured a surplus of over $100,000. The company's expenses were heavy, its business was light, and the condition of its roadbed and rolling stock poor. In the latter part of 1907 earnings began to decline, while about the same time the Texas Railroad Commission issued orders that certain improvements should be made, including the laying of ballast and the renewing of ties on portions of the line. There is every probability that the company would have been compelled to default without the Railroad Commission's order, but these new requirements placed the matter beyond question. Mr. T. J. Freeman was appointed Receiver on February 26, 1908.

Besides the Seaboard Air Line and the International & Great Northern no railroad failed in 1908 which operated as much as 1000 miles of line. Important among

the smaller companies placed in receivers' hands were, however, the Chicago Great Western, the Western Maryland, the Wheeling & Lake Erie, the Wabash Pittsburg Terminal, and the Norfolk & Southern. The first three of these companies seem to have been caught with maturing indebtedness or outstanding short term notes which they found it impossible to renew. The Wheeling & Lake Erie was also heavily overcapitalized, and suffered severely from a decline in earnings which took place in 1908. The Wabash Pittsburg Terminal had a debt of $50,236,000 on sixty-seven miles of line, and in 1908 failed to earn its fixed charges by over $900,000. The enterprise had been mistaken in its conception, and extravagant in its execution; its failure under any great pressure was to be expected. Under ordinary circumstances Mr. Gould might have been expected to assist these two essential links in his transcontinental line, but the fact that he had used the credit of his more prosperous companies in previous years to finance western extensions put it out of his power at this time to extend financial aid. The remaining company, the Norfolk & Southern, was a combined railroad and a lumber enterprise, organized in November, 1906, through the consolidation of five smaller companies. In the year ending June 30, 1908, it failed to earn its charges by $485,934 and found it necessary to charge to Profit & Loss some $726,102 more. Some readjustment of its financial obligations was a matter of evident necessity.

So far as the failures of 1908 are concerned, it is safe to say that they were the natural and normal result of crisis conditions acting on weak railroad systems. The general railroad situation was sound, but a few companies could not stand the strain. It is when we come to the latter part of the decade that conditions become more serious.



The companies referred to in the chart are those failing between January, 1907, and December, 1917, which operated a mileage of over 500 miles. See p. 449.

The period 1907–1916 was one of rapidly increasing expenses of railroad operation. Prices of articles which the railroads had to buy grew higher all along the line, yet revenues did not grow to correspond. What this meant to the weaker railroads of the country may be summarily stated in the chart on page 453, in which the income and outgo for fourteen years is given per mile for the nineteen largest companies which failed during the period.

Plainly, income and outgo gradually grew together during the years covered by the above chart, until the cost of earning a dollar became greater than the dollar itself. Doubtless the better and stronger railroads of the country could resist pressure like this, for a time at least, but the weaknesses of other companies were pitilessly revealed. Generally speaking, the whole railroad net of the country was in a worse condition in 1911 than it had been in 1907 and was still worse in 1914 than in 1911. The renewal of panic conditions was certain to be more disastrous than it had been at the beginning of the decade, while even in times of relatively active business an increasing number of companies was likely to go to the wall.

The large railroad companies which failed between 1908 and 1914 were three in number: The Wabash in 1911, the Pere Marquette in 1912, and the St. Louis & San Francisco, including the Chicago & Eastern Illinois, in 1913. One may speak of them as " ad interim " failures. The mileage of the Wabash lay in the competitive territory between St. Louis and Toledo. It was an old road, heavily capitalized, which lacked money for necessary improvements, and even, according to its managers, for adequate maintenance. It had, moreover, become involved in heavy obligations in connection with its purchase of the Wheeling & Lake Erie

Railroad and the Wabash Pittsburg Terminal, and had used for speculative extension credit which should have been employed to finance additions and betterments to its own lines. Even the exceptionally able management of Mr. F. A. Delano had failed to place the Wabash on a secure footing, while the refunding of its debenture bonds in 1906 had increased its fixed charges without substantially increasing its ability to raise funds. In the year ending June 30, 1911, the company failed to earn its interest charges by over $200,000. In the succeeding months earnings continued to decline. $7,500,000 were required immediately for new cars and equipment; yet the money could not be found. A committee to readjust the finances of the road was appointed in December, and a receiver was soon afterwards applied for.

The troubles of the Pere Marquette dated back many years. This company had failed in 1905 and had been reorganized two years later. In 1908 it fell short of earning its fixed charges by $393,667. In the two following years it managed to meet expenses, but in 1911 it fell behind nearly two million dollars and in 1912 its record was even worse. The fundamental difficulties of the company were due to the cutting over of the Michigan forests and to the consequent decline of its lumber traffic, to high capitalization, increasing expenses, and to legislative regulation of rates and fares. With fixed charges of $2473 per mile and net income of $1467 (in 1911) and with an operating ratio of 80 per cent it was not to be expected that it could remain solvent. The property was at one time controlled by the Cincinnati, Hamilton & Dayton.

The failure of the St. Louis & San Francisco Railroad is attributed by the Interstate Commerce Commission to the excessive prices paid for certain subsidiary prop-

erties, notably the Chicago & Eastern Illinois and lines in southern Texas; to the large profits made by insiders in connection with new construction in the Southwest; and to the sale of securities at such low prices as to indicate a deplorably weakened credit or extravagant arrangements with bankers. Many of these transactions resulted in substantial profits to Mr. Yoakum, the dominating influence in the St. Louis & San Francisco affairs, at the expense of the company itself. Their result was a high and increasing funded debt, and interest charges which grew from $1741.91 per mile in 1897 to $2774.81 per mile in 1913. In 1902 interest charges absorbed 39.45 per cent of net earnings; in 1913 they absorbed 75.41 per cent. Failure occurred as the immediate consequence of the company's inability in 1913 to obtain the extension of $2,500,000 in short term notes which then fell due. The bankruptcy of the St. Louis & San Francisco carried with it the failure of its subsidiary, the Chicago & Eastern Illinois, a company which was also suffering in 1913 from high operating expenses and a substantial decline in earning.

Principal among the minor failures of the period were those of the Atlanta, Birmingham & Atlantic and of the Kansas City, Mexico & Orient. The former company was conceived and promoted in 1905 by Boston and Atlanta capitalists in order to develop the port of Brunswick, Georgia, in competition with Savannah. It was capitalized on the basis of an earning power which failed to develop, and with the falling off in business in 1908, it passed into receivers' hands. The Kansas City, Mexico & Orient was an uncompleted project for a railroad from Kansas City, Missouri, through Kansas, Oklahoma, and Texas to the west coast of Mexico. The parties back of the scheme lacked adequate banking connections, and proved unable to sell

sufficient securities after 1908 to enable them to continue with their plans.

This concludes the list of what have been called the "ad interim" failures. Each failure was that of a weak company suffering from mismanagement, excessive charges, or low earning capacity. Each took place, moreover, at a time when a rapid and general advance in railroad operating expenses bore heavily on railroad enterprises of every sort. We come now to the final group of railroad failures, those which occurred after the outbreak of the European war.

The immediate effect of the war was to give a severe shock to credit, which was followed by a sharp decline in railroad revenues. Somewhat later the increased prices due to war demands and to currency inflation intensified the strain to which railroads all over the country were subject. A considerable number of failures was normally to be expected.

The first considerable bankruptcy in 1914, however, occurred before the outbreak of the European war. This failure was that of the Cincinnati, Hamilton & Dayton Railroad. Fifteen years ago the Cincinnati, Hamilton & Dayton was a reasonably prosperous undertaking, which operated 652 miles of line in the states of Ohio and Indiana, and reported a surplus of $558,000 for the year. According to the Interstate Commerce Commission, the company was forced by its owners after 1902 to finance a number of transactions which involved it in heavy loss. Reference is made particularly to the purchase of Pere Marquette stock for $125 a share, stock that was subsequently sold to J. P. Morgan & Co. for $23 a share at a loss aggregating over twelve million dollars, and to the retirement of the Dayton's own preferred stock by the sale of collateral trust interest-bearing notes. As a result of these and other

operations, fixed charges grew from $1944 per mile to $3851, while the net income of the company declined from $2036 per mile in 1905 to $551 in 1914. There was not a year during the period when the company paid its way. In 1914 the operating ratio was 92 per cent, an increase from 74 per cent in 1912. The Cincinnati, Hamilton & Dayton had been placed in receivers' hands in 1905. It returned there in 1914 naturally and without power to resist.

In August, 1914, occurred the second failure of the International & Great Northern. This company underwent a sensational decline in earnings between 1913 and 1915, which cut its net income in half, and transformed a moderate surplus into a deficit of $1,121,397. The cause of its bankruptcy in 1914, however, was the maturity of eleven million three-year 5 per cent notes which had been issued under the reorganization plan of 1911, and which the company found it impossible to renew.

Five months later the Chicago, Rock Island & Pacific went to the wall. The net earnings of this corporation in 1914 were $2,454,106 less than they had been in the preceding year, while its fixed charges and taxes had increased by $342,883. The real reason for the failure, however, lay in the impaired credit of the company, which in turn had resulted from its reorganization in 1902, and from heavy losses incurred in connection with a series of financial transactions in which the Rock Island became involved under the direction of an unscrupulous and speculative management. These losses were estimated by the Interstate Commerce Commission to have amounted to more than twenty million dollars, spread over a period of about twelve years.

Following the failure of the Rock Island came in 1915 those of the Western Pacific, Missouri Pacific, St. Louis,

Iron Mountain & Southern, and Missouri, Kansas & Texas. The Western Pacific was a railroad which was built by the Gould interests in order to complete their transcontinental lines, and to free themselves from the domination of the Southern Pacific. It proved unable to earn as much as was expected, and cost between fifty-five and sixty million dollars instead of the thirty-five million dollars of the original estimate. The road was built entirely from the proceeds of bond issues, and failed for the very simple reason that it could not earn fixed charges of $2,500,000 per year.

The Missouri Pacific was likewise a Gould road, and one which suffered heavily from the inability of the Gould system generally to operate at a profit. The Wabash bankruptcy alone cost it several million dollars through the loss in value of the Wabash stock which it held. Like the Wabash the credit of the Missouri Pacific had been used to finance other Gould projects. Its capitalization was excessive, and for several years fixed charges had exceeded the net income. Notes to the amount of nearly twenty-five million dollars matured in 1914. The operating ratio of the company was high, but had not notably increased during the few years previous. The St. Louis, Iron Mountain & Southern was a part of the Missouri Pacific system and went down with it, suffering particularly from the inability of the Texas & Pacific to pay interest on Texas & Pacific income bonds.

Still another Gould property was the Missouri, Kansas & Texas, a system of 3865 miles reaching from St. Louis and Kansas City to San Antonio and Galveston. Representatives of bankers who examined the property in 1916 reported that this company would have to spend $64,764,750 in eight years to put it in first class condition and that the expenditure of $26,636,000 in two

years was essential. Physically the railroad company was in poor condition. It also suffered from extremely heavy interest charges, and from a disproportionate amount of short time indebtedness. The system had expanded rapidly between 1910 and 1916 with inadequate capital and credit, under the control of parties who preferred dividends to the investment of surplus earnings in well conceived improvements. In 1914 the property had an operating ratio of 72 per cent, while fixed charges took up 93 per cent of its net income. This was not the kind of financial preparation calculated to meet successfully a decline of surplus revenue of $1,500,000 which took place the same year.

We have now to mention only two remaining bankruptcies, those of the Texas & Pacific, and of the Boston & Maine. Both occurred in 1916. The Texas & Pacific Railroad ran from New Orleans to Sierra Blanca, Texas. It seems to have been in rather better financial condition at the time of its failure than most of the Gould lines, both in respect to capitalization and in respect to earnings. It was hampered in financing improvements, however, by an inelastic federal charter, and was forced into receivers' hands by the institution of suits demanding payment of certain overdue notes which the company was unable to meet, together with $23,872,228 of interest alleged to be in default on second mortgage bonds. The Missouri Pacific owned practically all of the second mortgage bonds and a large block of Texas & Pacific stock.

The circumstances leading to the receivership of the Boston & Maine are fresh in the public mind. This failure did not take place in 1916 because of conditions peculiar to that year — on the contrary the earnings of the company in 1916 were unusually good. But the

company was handicapped by its relations to a large number of subsidiary lines, the earnings of which no longer justified the rentals which were being paid them by its connection with the New York, New Haven & Hartford, and by the unwillingness of its management to cease the payment of dividends long after the company's finances demanded such action. The decline in value of Boston & Maine stock from $180.50 in April, 1906, to $21 in January, 1918, was one of the severest blows which has been dealt the small investor in American railroad securities in recent years. The immediate cause of the failure was the maturing of a large quantity of short term notes, and the decision of the management to make no further effort to extend these notes in view of the pressing need for a general financial readjustment.

Summarizing the causes of the failures of the large railroad companies to which individual reference has been made, we may say in the first place that underlying conditions were largely responsible. The period 1908–1916 witnessed two severe shocks to railroad credit, one in 1907, and the other in 1914, each followed by a sharp decline in railroad earnings. Moreover, during all these years, a tendency of railroad operating expenses to rise more rapidly than railroad earnings is plainly discernible, due to causes over which the railroads had no control. Conditions like these imposed a strain upon all the railroads of the country, which the weaker companies proved unable to withstand. The reasons why certain railroads and not others, however, were the ones to succumb must be sought in the individual experience of the different companies. Thus it appears that a number of railroads exposed themselves to disaster by undue reliance upon short time financing to meet their capital requirements. Such were the Chicago, Rock

Island & Pacific, St. Louis & San Francisco, Chicago Great Western, Missouri Pacific, Wheeling & Lake Erie, and a number like them. Other companies, and this is true of most of those which failed, accumulated a load of fixed charges which only a continued period of prosperity could have enabled them to bear. Still others were guilty of unwise extensions, as in the case of the Western Pacific and the Wabash Pittsburg Terminal. Finally, there was the effect of legislation, competition, abuse of fiduciary position by parties in control, excessive dividends, and in some cases the long delayed result of policies adopted a generation before. The systems which failed were not as a rule financially sound — a fact which had to be taken into account in providing for their financial reorganization.[1]

II

Out of twenty-one companies operating five hundred miles of line or more that failed between 1907 and 1917, five were set on their feet between 1909 and the end of 1911, ten were reorganized between November, 1915, and June, 1917, and six were still in receivers' hands at the time of writing (December, 1917). This last mentioned group includes the Chicago & Eastern Illinois, the International & Great Northern, Missouri, Kansas & Texas, Boston & Maine, Texas & Pacific, and the Kansas City, Mexico & Orient. With two exceptions, it consists of companies which have failed since August, 1914.

From the point of view of thoroness the completed reorganizations fall into two groups. In the first group,

[1] A considerable quantity of material bearing upon the causes for recent railway failures has been intelligently compiled by W. C. Fankhauser, Stock and Bond Expert for the California Railroad Commission. This material has recently been filed with the Newlands Joint Committee on Interstate Commerce.

which includes the Chicago Great Western, Seaboard Air Line, Western Maryland, International & Great Northern (1911), and the Chicago, Rock Island & Pacific, the bankers in charge of proceedings contented themselves in the main with clearing away the existing floating debt, retiring one or more of the junior bond issues, usually small in amount, and in some cases, but not in all, making provision for the issue of bonds in the future to secure to the railroad system new capital as it was needed. In the second group may be placed those companies which, like the Norfolk & Southern, Atlanta, Birmingham & Atlantic, Cincinnati, Hamilton & Dayton, Western Pacific, Pere Marquette, Missouri Pacific, and St. Louis & San Francisco, undertook a comprehensive readjustment of their capital obligations, with the intent not only to provide for pressing needs, but to reduce also fixed charges so drastically as to make future difficulties in the highest degree unlikely.

To some extent the difference between the two groups may be attributed to the dates at which the reorganizations took place. With one exception, the Norfolk & Southern, none of the large railroads which were reorganized between November, 1909, and September, 1911, accomplished any thorogoing readjustment. The later difficulties of the period were not then foreseen. On the other hand, eight out of the ten reorganizations which took place after the outbreak of the European war were marked by extensive reductions in fixed charges and by far reaching series of exchanges of old securities for new. Yet there were individual differences between the companies which also helped to account for the different policies pursued. The Chicago Great Western, which was the first of all the large corporations to emerge from bankruptcy, failed because of its

inability to meet $3,342,545 in short term notes which had become due, and because of the threatening maturity of other similar issues. The problem of this company seemed therefore relatively simple. Its principal financial task was that of paying off its floating debt, and of providing certain necessary funds for future improvements. In the case of the Chicago, Rock Island & Pacific the reorganization was preceded by the foreclosure of the Chicago, Rock Island & Pacific Railroad collateral bonds secured by the stock of the operating company, which had the effect of sloughing off the top-heavy capitalization of the Rock Island Company, and left the railway company with relatively little to do in the way of readjustment of its own obligations. Doubtless also the prominence which inability to pay maturing obligations assumed in the weeks before failure had something to do with the nature of the reorganization of the Western Maryland. Yet here, as still more strikingly in the case of the International & Great Northern and the Seaboard Air Line, it proved unfortunate that the managers of the companies did not seize the opportunity to place their enterprises upon a permanently stable basis.

The first problem which the reorganizations from 1907 to 1917 had to meet was that of making provision for their cash requirements. The sums which the bankrupt companies had to raise during the period were large — in fact the cash requirements of the fifteen companies under discussion amounted to more than $221,000,000. This sum had accumulated in the usual way. It represented overdue interest, unpaid operating expense, and the ordinary run of floating debt which piles up before a railroad failure. In part also it was the result of the expenses of reorganization itself, for the cost of legal proceedings, counsel fees, syndicate commissions

and the like often ran into large figures. Thus at the time its reorganization plan was published, the Western Pacific expected to pay nearly two million dollars for costs of reorganization. Nor was this unusually high. The Atlanta, Birmingham & Atlantic, a company operating only 641 miles of line, with net operating revenues in 1915 of less than $140,000, had to set aside $178,500 for counsel fees, $216,000 for commissions to syndicate managers and underwriting syndicates, and $269,771 for other reorganization expenses. The Pere Marquette paid $675,000 for the work of its reorganization committees alone, and estimated that the total expenses for readjustment of its finances would amount to $2,679,000. The Wabash likewise estimated its expenses of reorganization at $3,449,500; and the Wheeling & Lake Erie proposed to raise for the same purpose $2,556,249, a sum which included in this case a provision of working capital for the new company. These were very considerable sums for bankrupt companies to charge to their expense accounts.

On the other hand, a very considerable portion of the money raised represented new productive investment. In the case of the St. Louis & San Francisco this item of new investment amounted to nearly $11,000,000. In that of the Chicago Great Western, $9,892,274 was specifically set aside to cover the cost of rehabilitation, additional terminals, equipment, and shops. Likewise the Missouri Pacific provided $12,713,792 to cover the cost of additional working capital, new equipment and immediate improvements, as well as for readjustment expenses and the payment of loans. Other companies made varying but similar provisions. This was a very different matter from the cash requirements arising out of reorganization expense. The companies which raised money for physical rehabilitation possessed increased

assets of considerable importance which might legitimately offset an increase in capitalization. Those which needed funds to pay counsel fees, on the contrary, had nothing but receipted bills for outlays which ought never to have occurred.

Cash requirements may be met by assessments upon security holders, by the sale of stock or bonds, or by a combination of these two methods. Examination shows that only about one-half of the fifteen companies considered made any use of assessments as a means of raising cash. The following table indicates the amount and distribution of assessments where any occurred in the reorganizations of the period:

Name of company	Common stock	1st preferred	2d preferred	Junior securities
Chicago Great Western	15	15	..	....
Western Maryland	40	..	..	....
Wheeling & Lake Erie	27	27	27	....
Wabash	30	30	..	....
Pere Marquette	10	10	10	25–40 % on refunding mortgages, debentures and collateral trust bonds
St. Louis & San Francisco	50	50	50	....
Missouri Pacific	50	..	..	....

The remaining companies relied on the sale of new securities to meet their cash requirements, protecting themselves against failure by contracts with underwriting syndicates. Examples of this procedure were the issue by the Seaboard Air Line and sale of $18,000,000 of adjustment bonds, the sale by the International & Great Northern of $11,000,000 three-year notes payable in 1914, and that by the Kansas

City, Mexico & Orient of $5,640,200 six per cent notes payable two years after date. For the same purpose the Atlanta, Birmingham & Atlantic placed $30,000,000 of its common stock with a syndicate at the not unreasonable price of $12 per share, while the Western Maryland combined an assessment with an offer of stock to its former shareholders at $40. The best defense of this kind of financing is the fact that assessments are sometimes very difficult to collect, especially when the reorganization has been otherwise drastic. Yet in the case of the International & Great Northern and the Kansas City, Mexico & Orient the issue of short time notes was a direct cause of renewed bankruptcy, while the issue of large quantities of low grade securities by other companies was not calculated to improve their credit. When assessments were levied, preferred stock was usually given for the cash paid in, altho the St. Louis & San Francisco and Missouri Pacific offered new bonds in exchange.

With this brief outline of the provision which recent reorganization plans made for their cash requirements, we may pass to the question of fixed charges. The following table gives the fixed charges for interest and rentals before and after reorganization, for the principal railroads, the finances of which were overhauled during the period which we are considering.

It is plain that a substantial reduction in fixed charges was the rule in these reorganizations. A single exception, the case of the Chicago Great Western, is accounted for by the unusual proportion of debenture bonds and stock in the capitalization of that corporation before reorganization took place. It must be remembered, moreover, that railroad property after reorganization is frequently able to bear heavier charges than before reorganization by reason of the considerable

FIXED CHARGES (INTEREST AND RENTALS)

Name of company	Before reorganization	After reorganization	Percentage decrease
Seaboard Air Line	$4,035,868	$3,681,091 [2]	8.79
Chicago Great Western	1,008,768 [3]	2,751,576	172.76 [1]
International & Great Northern	1,918,008	1,379,137	28.09
Western Maryland	2,742,074	2,240,236	18.30
Wheeling & Lake Erie	1,849,516	875,713 [4]	52.65
Norfolk & Southern	1,101,468	509,049	53.79
Atlanta, Birmingham & Atlantic	1,279,122	204,500 [4]	84.01
Wabash	7,581,802	5,038,861	33.54
Kansas City, Mexico & Orient	1,033,758	338,412	67.26
Pere Marquette	4,492,256 [5]	2,352,476 [4]	47.63
St. Louis & San Francisco	12,160,995	9,158,190	24.69
Cincinnati, Hamilton & Dayton	2,417,803	1,251,553 [7]	48.23
Western Pacific	4,088,029 [6]	1,090,641 [6]	73.32
Chicago, Rock Island & Pacific	14,323,732	12,385,036	13.53
Missouri Pacific	13,354,005 [7]	9,773,233	26.81
Total	$73,387,204	$53,029,704	27.74

new cash investment in the road; and to the extent of this gain in strength a comparison of charges before and after reorganization gives a misleading result. Indeed, the fixed charges of $1,090,641, reported in 1917 by a company like the Western Pacific, represented almost entirely interest on new expenditure, which was confidently expected to earn its charges. Substantially the same can be said of the reorganization of the Atlanta, Birmingham & Atlantic, and to a greater or less extent it is true of all the companies for which figures are given.

[1] Increase.
[2] Does not include $832,650 non-obligatory interest on debentures.
[3] Does not include $1,129,426 interest on debentures.
[4] Estimated.
[5] Does not include $300,000 interest on debentures.
[6] Does not include interest on unsecured indebtedness.
[7] Does not include rentals.

The reader's attention is now directed to a comparison of the capitalization of fifteen bankrupt railroads after reorganization, with the capitalization of the same railroads before reorganization.

CAPITALIZATION BEFORE AND AFTER REORGANIZATION

Name of company	Before reorganization	After reorganization	Per cent increase	Per cent decrease
Seaboard Air Line	$139,108,500	$158,746,000	14.11	..
Chicago Great Western	125,223,351	122,999,013	..	1.79
International & Great Northern	38,765,850	35,457,000	..	8.53
Western Maryland	76,638,225	84,912,385	10.80	..
Wheeling & Lake Erie	66,662,997	73,668,858	10.51	..
Norfolk & Southern	39,517,198	27,122,200	..	31.36
Atlanta, Birmingham & Atlantic	60,096,591	39,290,000	..	34.62
Wabash	200,685,377	205,118,000	2.21	..
Kansas City, Mexico & Orient	50,582,751	25,640,200	..	49.31
Pere Marquette	108,325,129	105,000,000	..	3.07
St. Louis & San Francisco	284,508,618	319,221,998	12.20	..
Cincinnati, Hamilton & Dayton	62,732,775	33,746,650	..	46.21
Western Pacific	150,000,000	95,000,000	..	36.67
Chicago, Rock Island & Pacific	331,197,105	360,940,994	8.98	..
Missouri Pacific	363,296,340	379,372,219	4.42	..
Total	$2,097,340,307	$2,066,235,517		1.48

In five cases, those of the Western Pacific, the Cincinnati, Hamilton & Dayton, the Norfolk & Southern, the Atlanta, Birmingham & Atlantic, and the Kansas City, Mexico & Orient, the wiping out of junior securities or stock occasioned a considerable reduction in capitalization. The Norfolk & Southern sacrificed its preferred and common stock, and preserved only its prior liens and first refunding 5's, which together approximately represented the original cash investment in the property. The Cincinnati, Hamilton & Dayton reduced its general mortgage bonds and its outstanding obligations to the Baltimore & Ohio. The Kansas City, Mexico & Orient wiped out its preferred and common stock. The Atlanta, Birmingham & Atlantic eliminated its general mortgage bonds, while the Western Pacific

repudiated its second mortgage bonds, altho these probably represented in large part actual investment. On the other hand, the Seaboard Air Line, the Western Maryland, the Wheeling & Lake Erie, the St. Louis & San Francisco and the Chicago, Rock Island & Pacific[1] actually increased their capitalization as a result of reorganization; while other companies came out of receivers' hands with a capitalization not very different in respect to the total amount of securities outstanding from that with which they went in. Taken as a group no considerable attempt to reduce capitalization is apparent. It was not in this way that fixed charges were reduced.

Nor does it appear that the railroads which reorganized between 1907 and 1917 were able in any important degree to cut down the rates of interest which they were compelled to pay. In this respect the reorganizations of the period under review differed materially from those completed in the nineties, owing to the general rise in interest rates characteristic of the time. The following table illustrates this point by giving the aggregate bond issues at different rates for fifteen bankrupt companies both before and after reorganization.

Among the large issues at low rates put out in the course of reorganization were the Missouri Pacific 4's maturing not later than 1975, and authorized up to one hundred million dollars; the St. Louis & San Francisco prior lien 4's, series A, maturing in 1950, and authorized up to two hundred and fifty million dollars; and the Seaboard Air Line's refunding 4's maturing in 1959 and authorized to a total of one hundred and twenty-five million dollars. Both the Missouri Pacific

[1] This does not take into account the earlier elimination of the securities of the Rock Island Co. by foreclosure of the Chicago, Rock Island & Pacific R. R. bonds. If we include this operation the capitalization of the Rock Island lines would show a material decrease.

RATES OF INTEREST BEFORE AND AFTER REORGANIZATION
(15 Roads)

Rate of interest	Before reorganization		After reorganization	
	Amount	Per cent	Amount	Per cent
3½	$5,569,950	.39	$5,569,950	.50
4	661,974,010	46.88	543,323,044	48.36
4½	57,098,140	4.04	51,043,140	4.54
5	550,366,090	38.98	390,402,573	34.74
6	132,201,319	9.36	131,035,318	11.66
7	348,000	.02	348,000	.03
8	1,211,250	.09	1,211,250	.11
Not specified	3,341,147	.24	683,770	.06
Total......	$1,412,109,906	100.00	$1,123,617,045	100.00

and the St. Louis & San Francisco put out new issues at 5 per cent, however, contemporaneously with those just mentioned, while it is to be noted that under the terms of their principal mortgages both companies reserved the right to place bonds at rates of interest not exceeding 6 per cent, if they should feel it necessary. There is apparent on the whole some decline in the percentage of bonds bearing interest rates of 5 per cent, but the change is very slight and the relief obtained from this cause inconsiderable. As compared with the reorganizations of the nineties a strikingly large proportion of the new securities put out during the last ten years bore interest at the rate of 5 per cent or higher. The unsatisfactory condition of the money market is evidenced by the further fact that none of the large new issues of bonds under the various reorganization plans ran for more than fifty years.

The principal device by which reorganizing railroads reduced their interest charges between 1907 and 1917 was by the substitution of securities, the payment of

the interest on which was optional, for securities which called for a fixed payment in good times or in bad. In other words, old mortgage bonds were called in and income bonds or stock issued in their stead. This was a practice already well known in the nineties. The following analysis of the total capitalization of fifteen bankrupt railroads before and after reorganization will make evident the sort of exchanges which took place.

Analysis of Capitalization Before and After Reorganization

Before Reorganization

Name of company	Per cent mortgage bonds	Per cent income bonds	Per cent preferred stock	Per cent common stock	Total
Seaboard Air Line	54.8	0.2	18.0	27.0	100
Chicago Great Western	14.6	22.4	27.5	35.5	100
International & Great Northern	74.8	..	..	25.2	100
Western Maryland	79.5	..	..	20.5	100
Wheeling & Lake Erie	44.5	..	25.5	30.0	100
Norfolk & Southern	50.1	..	12.1	37.8	100
Atlanta, Birmingham & Atlantic	41.8	..	16.6	41.6	100
Wabash	53.4	0.6	19.5	26.5	100
Kansas City, Mexico & Orient	46.0	..	27.0	27.0	100
Pere Marquette	71.1	4.6	11.0	13.3	100
St. Louis & San Francisco	83.0	2.1	7.4	7.5	100
Cincinnati, Hamilton & Dayton	86.8	..	0.4	12.8	100
Western Pacific	50.0	..	..	50.0	100
Chicago, Rock Island & Pacific	71.5	6.0	..	22.5	100
Missouri Pacific	77.2	..	..	22.8	100

Even a cursory glance at the table on page 473 will show that the following changes occurred.

In the first place, the percentage of mortgage bonds to total capitalization was very much reduced. In the case of the St. Louis & San Francisco the reduction was from 83 per cent to 57 per cent; in that of the Western Pacific from 50 per cent to 21 per cent; in that of the

After Reorganization

Name of company	Per cent mortgage bonds	Per cent income bonds	Per cent preferred stock	Per cent common stock	Total
Seaboard Air Line	44.7	15.9	15.7	23.7	100
Chicago Great Western	29.9	..	33.3	36.8	100
International & Great Northern	72.1	..	9.6	18.3	100
Western Maryland	60.0	..	11.8	28.2	100
Wheeling & Lake Erie	24.2	..	30.2	45.6	100
Norfolk & Southern	34.4	..	..	65.6	100
Atlanta, Birmingham & Atlantic	10.4	13.2	..	76.4	100
Wabash	32.3	0.2	46.3	21.2	100
Kansas City, Mexico & Orient	22.0	..	..	78.0	100
Pere Marquette	34.6	..	22.5	42.9	100
St. Louis & San Francisco	57.0	25.6	2.2	15.2	100
Cincinnati, Hamilton & Dayton	85.2	..	..	14.8	100
Western Pacific	21.1	..	28.9	50.0	100
Chicago, Rock Island & Pacific	65.6	..	13.8	20.6	100
Missouri Pacific	57.9	..	20.2	21.9	100

Pere Marquette from 71 per cent to 34 per cent; in that of the Wheeling & Lake Erie from 44 per cent to 24 per cent; and in that of the Atlanta, Birmingham & Atlantic from 41 per cent to 10 per cent. These were the most striking instances of a reduction in the percentage of mortgage bonds to total capitalization, but some reduction occurred in every case save that of the Chicago Great Western, and here the elimination of the debenture 4 per cent stock was itself an achievement of some importance. It was by this cutting down of mortgage indebtedness that the reorganizations between 1907 and 1917 accomplished the saving in fixed charges which was their most important result.

In three important cases the reduction of mortgage indebtedness was accomplished by a material increase in income or debenture bonds. The largest use of such bonds was by the St. Louis & San Francisco rail-

road. This company put out two issues, one known as adjustment mortgage 6's, and the other as income mortgage 6's, to an aggregate of $75,739,818. Both were entitled to interest not to exceed 6 per cent, payable out of available net income. Interest on the adjustment mortgage was payable semiannually; on the income mortgage annually; interest on the former was cumulative, on the latter noncumulative, and the lien of the income mortgage was inferior to that of the adjustment mortgage. Except for a slight difference in the dates of maturity the issues were otherwise similar. Both were offered in exchange for outstanding bonds, that is to say, holders of St. Louis & San Francisco Railroad Company 4's were offered 75 per cent in new prior lien mortgage 4's, plus 25 per cent in adjustment 6's for their holdings, and owners of general lien St. Louis & San Francisco 5's received 25 per cent in prior lien 4's, 25 per cent in adjustment 6's, and 50 per cent in income 6's. Preferred stock was used in connection with the retirement only of certain minor indebtedness. It is to be observed that the old prior lien and general lien bond holders thus received the right to a somewhat greater return than they had earned before, while surrendering the power to insist in any year upon the payment of any fixed amount whatever.

A second company which made use of income bonds was the Seaboard Air Line. Here there was but one issue of cumulative 5 per cent adjustment mortgage bonds, secured, as was also the case with the St. Louis & San Francisco securities, by a general lien upon all the property of the company, subject to prior mortgages. It was specifically provided that no interest upon any obligation secured by mortgage or lien junior to the lien of the adjustment mortgage, or upon any

unsecured bond or debenture issued by the company subsequent to the date of the adjustment mortgage, nor any dividends upon any of the stock of the company could be deducted from net income for the purpose of determining the surplus net earnings applicable to interest on the adjustment bond. The Seaboard Air Line used its adjustment bonds in exchange for outstanding general mortgage 5 per cent bonds and over-due interest, dollar for dollar, to the sum of $6,979,500, and in addition offered $18,000,000 of them to stock holders at 70 in order to provide for cash requirements.

The third instance of the use of income bonds in recent reorganizations is afforded by the issue of $5,200,000 5 per cent income bonds by the Atlanta, Birmingham & Atlantic, for the most part in exchange for outstanding liens, certificates, and equipment trust bonds dollar for dollar, but also in part in order to raise cash. These bonds were noncumulative. The directors of the company were authorized, however, to reserve from net income in any fiscal year an amount not in excess of 20 per cent of the net income of the Company, or in any event in excess of $100,000 in any single year, and to carry this to a so-called Income Bond Reserve Fund from which interest on income bonds might be paid in lean years in so far as the fund should be adequate.

In view of the assumption in current discussion that the day of income bonds has passed it is interesting to observe the very considerable reëmployment of this once popular form of obligation. It was evidently still thought possible by the companies which used income bonds to provide a security which by its lien, by its priority in the matter of dividends, and by its cumulative rights should enter the market on distinctly better terms than the most carefully guarded preferred stock.

On the whole, however, the retirement of outstanding bonds in recent reorganizations was effected more by the use of stock in exchange than by the offer of income bonds. This stock was endowed with the right to dividends at the rate sometimes of 4 per cent, but more generally at the rate of 5 or 6 per cent, when the earnings of the railroad might justify such a payment. In seven out of sixteen issues the dividends were cumulative. Holders of some preferred stock, such as that of the International & Great Northern and the so-called profit-sharing preferred stock of the Wabash, had, in addition to the right to receive dividends at the rate of 5 per cent, the privilege of demanding a pro-rata share in surplus earnings after the stock holders inferior to themselves had received 5 per cent.

Other provisions were as follows: without exception the preferred stock was given preference as to assets in case of liquidation, as well as to dividends in ordinary years, and in at least one case, that of the Wabash, this privilege extended to participation in surplus assets after other shareholders had received up to par of their securities. Preferred stock holders as a rule had equal voting rights with common stock holders. In the case of the Wheeling & Lake Erie prior lien stock holders were given the right to elect a majority of the directors under certain circumstances. Preferred stock was frequently convertible into common stock and was also redeemable at some stipulated price. Occasionally provisions appeared requiring the assent of the preferred stock before the directors might place additional mortgages on the company, or increase the amount of the preferred stock, or, as in the case of the St. Louis & San Francisco railroad, before they might lease additional property, guarantee interest or dividends on the securities of other companies, or even acquire more than

25 per cent in amount of the stock of any other company.[1]

In all this there is little not familiar to students of corporation finance, nor is the importance of attempts to protect preferred stock holders by elaborate provisions in their certificates probably very great. When a railroad is prosperous small differences in the privileges enjoyed by different classes of security holders may assume importance and be reflected in the price of stock. In times of stress, however, all stock holders are apt to fare very much alike. The following table shows the treatment accorded common and preferred shares of the companies which failed between 1907 and 1917 which had both common and preferred shares outstanding.

In most instances referred to, common and preferred stock fared alike or so nearly alike that the differences were negligible. In the reorganization of the Wheeling & Lake Erie and St. Louis & San Francisco some allowance was made for the superior position of preferred shares but none after all of any considerable importance. That the preferred A shares of the Chicago Great Western escaped assessment, and received double the amount of new common stock given to the holders of preferred B certificates, was doubtless due to the fact that the preferred B stock holders in this case enjoyed no preference over the common stock in respect to the

[1] A somewhat unusual distribution of earnings among various classes of stock holders is provided for in the certificates of the Seaboard Air Line issued in 1916. At this time the Seaboard Air Line put out three classes of preferred stock entitled to non-cumulative dividends up to the rates respectively of 6, 4 and 5 per cent. Surplus earnings were applicable to dividends without preference or priority as between the three classes. When the rates named should have been reached the directors were authorized but not required to add up to one per cent to the dividends of the 5 per cent preferred stock. After this matter of dividends on the 5 per cent preferred stock had been settled, the earnings which remained were to be paid over to the common stock until a rate of 4 per cent should have been attained. The next distribution was to be an additional dividend on the 4 per cent stock until the 4 per cent rate should have been raised to 6 per cent, after which all excess earnings were to go to the common stock alone. It is impossible to guess what the reasons for this extraordinary complexity could have been.

DISTRIBUTION OF NEW SECURITIES TO HOLDERS OF PREFERRED AND COMMON STOCK IN RECENT RAILROAD REORGANIZATIONS

Name of company	Description of stock held	New securities given in exchange		
		On payment of assessment	New preferred stock	New common stock
Chicago Great Western....	Preferred A	..	..	120
	Preferred B	15	15	60
	Common	15	15	40
Wheeling & Lake Erie.....	First Preferred	27	27	100
	Second Preferred	27	27	90
	Common	27	27	87.50
Wabash.................	Preferred	30	50	50
	Common	30	50	45
Pere Marquette...........	First Preferred	9.75	10	20
	Second Preferred	9.75	10	20
	Common	9.75	10	20
St. Louis & San Francisco..	First Preferred	50	50[1]	100
	Second Preferred	50	50[1]	90
	Common	50	50[1]	82
Seaboard Air Line.........	No foreclosure	Old stock undisturbed		

assets of the railroad company, whereas the preferred A holders were entitled to such a preference and thus stood in a distinctly better position. On the whole, the experience of the group of railroads which we are considering is not satisfactory so far as preferred stock holders are concerned. The introduction of a cumulative feature in so many of the new preferred stock certificates may be taken as a recognition of this fact.

While preferred stock was issued in recent reorganizations in return for assessments, or in consideration for

[1] Prior Lien bonds.

No provision was made at reorganization for the preferred or common stock of the Norfolk & Southern, Atlanta, Birmingham & Atlantic, Kansas City, Mexico & Orient, and Cincinnati, Hamilton & Dayton railroads.

surrender of outstanding bonds, common stock was generally given to holders of common stock of the old company in recognition of their equity when that equity had value. It is interesting to observe, however, that more extended use was sometimes made of the common share certificate. In four cases companies retired outstanding bonds in whole or in part by exchange with common stock. The four were the International & Great Northern, which exchanged common stock for third mortgage bonds; the Western Pacific, which joined 75 per cent in common stock with 50 per cent in preferred stock in its offer to first mortgage bond holders; the Norfolk & Southern, which gave $1142.80 in new common stock for every one thousand dollars of its outstanding first and refunding bonds; and the Pere Marquette, which employed common stock as part consideration in the retirement of a large number of its mortgage securities. The intention in these cases was to be radical without cutting off old bond holders from every chance of financial recovery. More frequently common stock was exchanged for old stock outstanding before the reorganization took place, as has been said, or it was sold in an attempt to raise cash to meet pressing needs.

Among miscellaneous provisions characteristic of the reorganizations which we are considering were those relating to future capital requirements and to the vesting of voting power for specified periods in the hands of voting trustees. Each may be dismissed briefly.

Most of the reorganized companies arranged for future capital requirements by authorizing some large issue of bonds, only part of which was to be put out at once for purposes stated in the reorganization plan, while the remainder was to become available from time to time for additional improvements and other similar

purposes. Illustrations of this practice were the $75,000,000 Chicago Great Western first mortgage 4's, the $75,000,000 Pere Marquette first mortgage 5's and the $250,000,000 prior lien mortgage 4's and 5's of the St. Louis & San Francisco. In the case of the Missouri Pacific a mortgage was authorized without fixed limit, with the provision, however, that the bonds issued should never exceed in amount three times the capital stock of the company. In some cases but not in all the quantity of bonds issued in any year was limited. The St. Louis & San Francisco reorganization plan contained the unusual provision that new prior lien bonds might be issued up to January 1, 1922, to an amount equal in par value to the entire cost of new equipment or improvements, but that after January 1, 1922, the issue could not exceed two-thirds of this cost. Since new bonds of these large general issues were to be put out over a considerable period of time, the rate of interest was left in several cases to be determined by the managers of the companies, so long as it did not exceed 6 per cent. The Wabash, Western Maryland, and Chicago, Rock Island & Pacific did not provide new mortgage issues of this sort. In the case of the Rock Island, however, it was expected that the payment of certain bond issues outstanding before reorganization would release sufficient collateral to enable the company to make necessary improvements.

The Chicago Great Western, Pere Marquette, and St. Louis & San Francisco plans directed, and that of the Missouri Pacific authorized, the formation of voting trusts to endure for a period of five years in each case. The number of trustees ranged from three to seven. In the case of the Chicago Great Western the trust was to be terminated on request of holders of a majority of the preferred stock certificates outstanding, plus a sufficient

number of common stock certificate holders to make a majority of all the stock outstanding. The greater number of reorganization plans, however, made no mention of a voting trust.

Regarded as a whole, the result of recent reorganizations cannot be said to be encouraging to holders of railroad securities of the more speculative sort. A man who bought St. Louis & San Francisco general lien 5's in 1909 at 91 saw them decline to a low point of 27½ in 1914 and then rise to 82⅛ in November, 1916. By the end of June, 1917, the aggregate market price of the securities offered in exchange for the bonds in question under the St. Louis & San Francisco reorganization plan would have been less than 57. The Pere Marquette refunding 4's of 1955 were quoted as high as 79 in 1910 and as low as 11½ in 1915. Under the reorganization plan of 1917, after payment of an assessment, they were exchangeable for common stock of the new company at the rate of $1104 in new stock for $1000 in old bonds. In June, 1917, this new stock was quoted about 53. Similar pyrotechnics characterized the record of the Wabash first refunding and extension 4's, and of the Missouri Pacific first and refunding 5's. Plainly such securities showed little of the stability commonly associated with the name of bond, while the general movement in all cases was downward. In most instances the reorganization plan provided for the retirement of large blanket issues of mortgage bonds by the issue of new stock, common or preferred, thus recognizing the uncertain nature of the security. Sometimes, as in the case of the St. Louis & San Francisco, income bonds were used. The following table shows the treatment accorded general mortgage bonds in the reorganization of the principal companies which had such issues outstanding.

TREATMENT OF GENERAL MORTGAGE BONDS

Name of company	Name of security	Volume outstanding	New securities offered in exchange, per cent			
			Mortgage bonds	Income bonds	Preferred stock	Common stock
Atlanta, Birmingham & Atlantic........	First Mortgage 5's	$14,443,000[1]	..	None	..	..
Cincinnati, Hamilton & Dayton........	General Mort. 4's	17,529,000[1]	70[2]	..	..	..
Missouri Pacific.....	First Refunding 5's	29,806,000	..	..	100	..
Norfolk & Southern..	First & Refund. 5's	14,000,000	..	..	..	114.28
Pere Marquette.....	Consol. Mort. 4's	8,382,000	..	..	110.40	..
Pere Marquette.....	Refunding Mort. 4's	14,789,000	..	..	..	110.40
Pere Marquette.....	Refunding Mort. 5's	17,157,942	..	..	..	50.00
St. Louis & San Francisco............	Refunding Mort. 4's	68,562,000	75	25	..	..
St. Louis & San Francisco............	General Lien 5's	69,384,216	25	75	..	..
Seaboard Air Line ...	General Mort. 5's	6,345,000	..	100	..	..
Wabash............	First Refunding & Extension	40,600,240	..	..	120	..
Western Pacific......	First Mortgage 5's	50,000,000	..	..	50	75

Mortgages junior to the general mortgage, when such there were, naturally fared no better than their superiors.

As compared with the generally unfortunate record of the blanket bonds, the holders of equipment bonds and notes of the various companies had the pleasant experience in every case of being paid off in cash at par or of being left undisturbed. In between these two extremes came the various kinds of collateral bonds, which received much or little in reorganization, according to the nature of the security on which they were based. Thus the Norfolk & Southern collateral 6's, secured by pledge of equipment bonds, were paid in full in cash and the St. Louis & San Francisco trust mortgage 6's of 1880, secured by first mortgage bonds of the system, were given one hundred and twenty-five per cent in new

[1] Eliminated by foreclosure sale. [2] Cash.

mortgage securities. On the other hand holders of Missouri Pacific gold loan 4's, issued against the pledge of St. Louis, Iron Mountain & Southern stock, were allowed only new common stock for their certificates, and the owners of Pere Marquette collateral trust 6 per cent notes fared even worse.

From the point of view of reorganization technique two matters seem to deserve emphasis in this rapid survey of recent railroad experience in finance. The first is the increased use of preferred stock with right to cumulative dividend, and the considerable reliance upon the cumulative income bond. No less than nine examples of these two classes of securities are outstanding. Indeed, they account for a considerable part of the saving of fixed charges of which mention has previously been made. This practice, however, has little to commend it. Railroads are to some extent protected by it against formal bankruptcy, yet such formal bankruptcy is often better than the piling up of a huge load of unpaid dividends before a worthless and speculative common stock.

A second matter in which recent reorganizations have differed from those of a decade or so before has been in the very moderate increase in capitalization for which they are responsible. In most cases this increase has not much exceeded, if at all, the value of the improvements made during receivership, the increase in working capital, and the decrease in current debts. The reason has been the critical attitude of the public, acting in part through commissions such as those of California, Michigan, and Kansas, the difficulty in disposing of large amounts of new securities, and the fact that several of the current reorganizations, as those of the Chicago, Rock Island & Pacific, the Western Maryland and the Seaboard Air Lines, have been very partial

affairs. Whatever the cause, this change in policy has been an improvement. It has not only simplified the railroad balance sheet from the point of view of the government and the investor, but it has helped to discourage speculation by holding down the quantity of low priced stock desired only for control, or for the chance of a rise in market price which it affords.

The real test of a reorganization, however, is not to be found in the quantity of securities which are put out, but in the success of the measures taken in placing bankrupt companies on their feet. A reorganization is an expensive experience, to be justified only by genuine financial relief. In this respect recent reorganizations have been on the whole unsatisfactory. Two of them, indeed, are already known to have failed, and both for the same reason. The International & Great Northern in 1911 and the Kansas City, Mexico & Orient in 1914 both attempted to satisfy their creditors by the issue of short term notes. The International & Great Northern notes were put out in 1911 and matured in 1914; the Kansas City, Mexico & Orient notes were issued in 1914 and matured in 1916. Neither company was able to pay its notes at maturity, and renewed receivership in each case was the result; this in spite of a reduction of fixed charges by the reorganization plan of the Kansas City, Mexico & Orient of over 67 per cent. In addition to these instances the reduction in the fixed expenses of the Western Maryland by its reorganization was so slight that the company has been unable to meet its charges in three out of six years which have since elapsed.

The three other reorganizations among those discussed which were completed before 1915 have not as yet proved failures, but no one of them placed the company concerned in a very strong condition. The

Chicago Great Western used 88 per cent of its gross income in 1916 to meet its operating expenses, fixed charges, taxes and rentals, and in that year for the first time earned as much as 4 per cent on its preferred stock. The position of the Seaboard Air Line was still worse. Neither company had cut its charges for interest and rentals at the time of reorganization in any important degree. The Norfolk & Southern, which had on the contrary materially reduced its fixed charges, nevertheless paid 92 per cent of its gross income in 1916 for various purposes before it could begin to provide for dividends or reserves. These statistics are to be compared with ratios of 67 per cent for the Great Northern & Union Pacific, 70 per cent for the Chicago, Burlington & Quincy, and 80 per cent for the Pennsylvania. It is a pity that so many of the reorganizations of the group which we have discussed did not adequately meet the first requirement of any successful reorganization, that of reducing fixed charges to such a degree that solvency under any conditions reasonably to be expected should be assured.

For the most part the later reorganizations are too recent for confident judgment to be passed upon them. In general they were more thoro than their immediate predecessors, and better results may perhaps be expected from them. In two cases, those of the Western Pacific and of the Atlanta, Birmingham & Atlantic, all outstanding securities bearing obligatory interest were eliminated. In other instances the reorganizations were less radical — indeed, in the case of companies like the Missouri Pacific and Chicago, Rock Island & Pacific, they were not radical at all. It is highly doubtful whether the financial readjustments which have taken place would enable the majority of the reorganized companies to endure another period of pressure similar to

that of the last decade. In view of the decision of the Federal Government to take over the railroads of the country, at least for the period of the war, and to guarantee their financial returns, this may not, however, be necessary.

STUART DAGGETT.

UNIVERSITY OF CALIFORNIA.

A STUDY OF THE INCIDENCE OF AN INCREMENT VALUE LAND TAX

SUMMARY

I. General considerations, 487. — Taxation conditions in Europe and the United States, 489. — II. Analysis of the effects of an increment tax of the British type, 490. — III. Numerical illustrations of the results of this type of increment tax, 497. — IV. Comparison with the results of the general property tax in the United States, 504.

I. General Considerations

From time to time suggestions are heard that increment value land taxes, copied like fashions in dress from European models, should be introduced in the United States. The aim of the proponents of these measures is usually to bring about some changes in land-holding, such as, to discourage large holdings, to encourage small holdings, to force more land into cultivation or use, or to penalize speculation in land. Thus a recent report says: "The increasing difficulty and hardships attendant upon the attempts of individuals of small means to procure, retain and develop a reasonable land-holding for farm, residential or business purposes, and the continued holding of land values in large ownerships in this state indicates that something is fundamentally wrong with our land economies." It further urges that: "the private ownership of large holdings of land unimproved and uncultivated is . . . against the public interest"; that: "the accretion of value thereto . . . is also against the public interest"; and that: "every man has the right through his labors to a reasonable living from the land." A bill accompanying the report, and intended to carry out its ideas, provides for the exemp-

tion, from certain proposed "excess value" taxes, of $5,000 worth of land for each resident holder "in recognition of the right of every individual to own a home and to obtain sustenance from the land," and then imposes: (1) an annual tax on the future increase in value of all holdings over the exemption, and (2) an additional annual tax on the increase in value of such land as is not "beneficially used."[1] It would be difficult to find a better illustration of the intermixture of ideas back of such proposals.

Even tho most of the proposed increment value land taxes are aimed at social and economic reforms, and their proponents are therefore prone to look upon them as lonesome taxes, independent of all others, yet such taxes will, if ever enacted, fall into place with other taxes and affect the balance and the incidence of the whole revenue system. Land is everywhere subject to taxation, in some form or other, and the new tax thereon finds one or more others in possession when it arrives. In the United States the tax burdens on land are already very heavy and on that account the question of the probable incidence and effect of an increment value land tax would be peculiarly important. Moreover, the realization of the hopes for "reforms," or changes intended to be such, must also depend very largely on the incidence and influence of the new tax in the environment into which it may come.

It seems worth while therefore to review and restate the theory of incidence in special application to this type of tax. The general principles involved are well established and familiar. Nothing new on the theory of incidence is advanced in this study. All that is attempted is to apply the familiar principles to a special

[1] Report of the Special California Tax Commission of 1917, pp. 90 ff., and Assembly Bill No. 1171, session of 1917, California Legislature.

problem, in as simple a way as possible, with the further idea of presenting a method so simple that anyone can apply it to test out the probable incidence of any proposed increment value land tax.

Taxes transplanted from one place to another do not always stay true to type. Thus the effects of increment value land taxes in Europe are in several respects different from the effects which the introduction of a similar tax in the United States would bring about. In a general way it may be said that when such taxes have been introduced in Europe they have been fitted into the existing tax system in order to reach a source of revenue, a type of property or of income, which it was held the other taxes did not adequately reach. Thus, for example, when Lloyd George proposed this form of taxation, it could, perhaps, be urged that land was not being adequately taxed. The old land tax, in so far as it had not been redeemed, was a fixed charge, like a rent charge, and did not vary with income or values. Altho the local rates were measured by the annual rents paid for houses and lands, they were paid by the tenants and, altho undoubtedly largely shifted to the landlords, did not openly appear to come from them. The inhabited house duty was also measured by annual value. In the same way, altho the income tax included income from land, it did not include the increase in the capital value of the land, which might be construed to be a form of income slowly accumulating and eventually collected. There was no tax based on the capital value of land, except the estate duty. That was not payable until the owner died and rested on a very different justification from other taxes. There was thus an apparent gap in the system which the increment value land tax might be held to fill. There was no need of an appeal to other than fiscal reasons for its imposition.

But in the United States the general property tax picks up the increment in land value as fast as, or nearly as fast as, it arises, and levies upon it as heavily as upon any other form of property. The increment is taxed, is taxed annually, and taxed very heavily. When land is unused the present capital value of expected future income is taxed often long before the income accrues. A special increment value land tax would, therefore, only stress a heavy burden already imposed on the same source. Moreover, the burden which the general property tax imposes on the increment is much heavier, in parallel cases, than that which is imposed by the specially designed increment value land taxes of other countries.

II. Analysis of the Effects of an Increment Tax of the British Type

To illustrate the principles involved, to give this study a specific content, it has seemed well to select some one definite form of an increment value land tax and study that. By so doing it has been found possible to shorten and simplify the presentation. It is believed that the method of analysis here used can be applied to any other increment value land tax with only such changes as the differences in rates and in the exemptions may make necessary in the numerals. The type of increment value land tax chosen is that of the British, imposed by the " Finance (1909–10) Act, 1910."

Omitting many details, important in themselves but not significant for our present purpose, this tax may be briefly described as follows. First, there was prepared a new " doomsday book " in which was entered the newly ascertained capital value of all land in the United Kingdom, as of a given day. Agricultural land was in-

cluded altho exempt from the tax as long as it remains agricultural land. The value taken was the capital value of the site alone, stripped of the value of anything that had been done to it by man. The value ascertained and entered in the doomsday book was called the "original" value. Whenever, thereafter, the land is sold, or passes to others on the death of the owner, it is revalued in the same manner as before. The new value is called the value on the "occasion," that is, on the occasion for the imposition of the tax. If the value on "occasion" exceeds the "original" value, the excess, or the increment, is taxable. But not all of it is taxed, there being deducted from the increment an amount equal to 10 per cent of the "original" value. The rate levied on the remainder is one-fifth. Thus the tax is one-fifth of the difference obtained by subtracting from the value on "occasion," if it be sufficiently the larger, 110 per cent of the "original" value. If the value has decreased, or if the increase does not exceed 10 per cent of the "original" value, there is no tax. When a subsequent sale or transfer takes place the value on the next preceding "occasion" is treated as the "original" value, and the tax is computed in the same manner as before.[1]

The theory of incidence used in this study is the generally prevailing theory of the incidence of all permanent land taxes, namely, the amortization theory. This theory is adopted without attempted proof other

[1] A very complete description of this tax, and of the other new taxes associated with it, is to be found in Napier, "The New Land Duties," and another in Devonshire and Samuels, "Duties on Land Values." It is hard to say which of these two admirable treatises is the better. A brief account of these taxes, prepared by the writer of this study, is to be found in the Report of the State Tax Commission of the State of California, 1917, pp. 131 ff. (This was a temporary commission.) A limited number of separate reprints are available. At the beginning of the war these land duties were suspended, because the yield was as yet small, the expenses of administration were very heavy, the administrative staff was depleted by recruiting, and many of the owners from whom returns were needed were at the front.

than that which is afforded by the fact that in this specific instance it affords a satisfactory explanation of the observed facts.[1] In accord with this theory it will be held that any permanent land tax makes the government a silent partner, as it were, in the land and causes at once a decrease in the present value of the active partner's share, that is of the private owner's share, or his property right in the land, equal in amount to the present value of the future tax payments, regarded as a series of payments, in so far as this series of payments can be foreseen, at the time of the imposition of the tax. But in so far as the tax may eventually be levied upon increments which are not foreseeable before they arise it has little effect on the capital value.

Every increment value land tax obviously predicates two values in the land. One is the present value, the other the future increment in value. But on closer analysis the present value in turn is found to contain two elements. One of these is the capitalized value of the income that is now being realized, or which could be realized now, by the use of the land in so far as that income is regarded as permanent, and the other is the present value of such additions to the income as are, at the present time, confidently expected to arise in the future. These are the two more or less certain factors in the value. But there is also another element which has been very aptly called the "windfall" element. There may be, some day in the future, additions to the real or potential income which are not now distinctly foreseeable. They may be vaguely and pleasantly hoped for, but save as they add to the optimism with which land investments are regarded they add nothing definite to the present value. The increment value tax

[1] In large part the method of treatment was suggested by Professor Pigou's letters to the London Times, 1910, and by the article in the Economic Journal, June, 1913, by Stamp.

when paid will fall on two elements in the value at the time it is paid. One of these is represented in the present value, in discounted form, the other, the windfall element, is barely perceivable in the present value. In passing it may be noted that the arguments by which the increment value land tax is supported are often of such a character as to lead one to suppose that the intent is to tax only the windfall element. But no increment tax in operation ever does this. In fact if the increment were entirely uncertain, and could not be "expected" by the owner, it is hardly likely that the government would think it worth while to "expect it" even to the extent of levying a tax on it.

Altho, as just stated, we can make no numerical calculations with regard to the increments in land value, or taxes thereon, that are not now foreseeable, there is nevertheless a probability that the tax on the unforeseeable will cause a slight depression in the present value of the land, because of the optimism which the possibility of such a windfall creates, and of the lessening of the optimism by the tax. If the chances were exactly even for a decrement or an increment there could be no evidence of the windfall value in the present value. But it is idle to deny that in new countries, and everywhere in connection with land near rapidly growing cities, the business world assumes that the chances of an increment are better than the chances of a decrement. This amounts to saying that the unforeseeable is treated in part as foreseeable. This is one of the elements accounted as part of the margin of safety that makes land such a favorite investment. In all this there is no intent to deny that an increment value tax in so far as it falls on an absolutely unexpected windfall is born solely by the recipient of the windfall. Nevertheless by far the greater part of such a tax is on the expected increment.

In this connection it may be well to point out that if the new taxes lessen the optimistic attitude toward land investments they may lessen the demand for land. Such a falling off in the demand for land may produce a greater proportionate fall in the capital value of land. This is somewhat analogous to Gregory King's law, altho that law relates primarily to consumers' goods and not to producers' goods or to land.

Money Value

We speak of these taxes as increment " value " taxes, and we must continue to do so since they are so designated in the laws. But the name is a misnomer. Strictly speaking they should be called " price increment " taxes. In so far as any of these taxes have been in force during the past twenty years, during which period the purchasing power of money has steadily fallen they have been levied in no small part on increments in price that correspond to no changes in value. It is a misfortune of increment value land taxes that they do not run true to name or purpose. They are distinctly frauds so long as the purchasing power of money is falling and self-defeating when it is rising. Thus if there had been such taxes in force in the United States during the Civil War period we might have had a result somewhat like this: a piece of land which sold in 1860 for $1,000 in gold, might have been sold again in 1864 for $2,500 in greenbacks, and been taxed on the basis of a $1,500 increment, the tax being a very real burden; then it might have sold again in 1878 for $1,000; and all this might have happened without any perceptible change in the use or demand for that land during the eighteen years. It is interesting to note that in contrast to this obvious perversion of purpose one may set the general property tax which applied in the same period to the same land, with only such changes in rate as the needs of the government dictated, would have

taken approximately the same proportion of the price and value alike all the time. A change in price resulting from a fall in the rate of interest would also give rise to an apparent increment and might involve a tax that was not within the intent of the law.

Before proceeding further one more generalization may be permitted. It has sometimes appeared to the writer that far too much is demanded of the theory of incidence. When we have traced the final incidence of any tax we have done nothing more than to find the back that bears the burden and the amount of the burden. Whether that back is the one that ought to bear it, whether it will bend or break under the particular burden found, or whether it be one that can carry that burden comfortably, these are all questions not answered at all. They relate to other and much larger issues, issues that are most vital. The determination of the incidence is a part, and possible a small part only, of the diagnosis of the effects of taxation. In what follows we shall not attempt particularly to study the ultimate effects on the general welfare of society of these or other land taxes. But in passing it may be stated that it is the conviction of the writer, contrary to the views of Henry George and others, that excessive taxes on land, in their ultimate effects, so check the production of food, when imposed on rural lands, and so hamper industry and trade, when falling on urban lands, that they discourage effort, materially reduce the social dividend and incidentally reduce the ground rent from which they themselves are taken. The so-called unearned increment so far as it can be anticipated is a part of the normal return to workers on and investors in land. If the silent partner, as Marshall calls the government, takes too much, the working partners, the owners, will be discouraged and may fail. This is true

even when the taxes have been as it were written off by amortization. But these again are matters beyond the scope of this study.

For our purpose the essential features of the increment value land tax are: (1) that it falls on the increase in the capital value only; (2) that it is not levied annually, or at any regular interval, but only at irregular intervals of time, when some " occasion " such as a sale, or transfer on account of death, gives a definite opportunity for the determination of the increase in value. The fact that during the interval of time between " occasions " the owner is left in undisturbed enjoyment of the entire income from the increment, as well as from the original value, is the characteristic feature of these taxes, and differentiates them from the " single tax " and from any property, income, or other regular, or annual tax falling on the land, or on the increment. Thus, for example, under the general property tax the the owner is forced to share the annual increment value, the increase in rental, each year with the government as it arises. Under the " single tax " he would not have any enjoyment of the annual increment value.

By a simile, which may, however, be easily overworked, one may say that the property tax makes the government a permanent partner with the private owner in the land, while the increment value land tax makes the government a contingent heir to a part of the value. Thus an increment value tax, calculable in advance, is for a person who contemplates preserving his estate intact, an insurable risk, like an estate duty. But the property tax being a loss certain, both as to time and persons, is not such a risk.

III. Numerical Illustrations of the Results of this Type of Increment Tax

In any evaluation of the incidence of an increment value land tax we have to use definite figures, one for: (1) the rate of increment in the value of the land under consideration, and another for: (2) the interval between occasions. For the first we cannot in our problem use an average. For if rent is " the value of a differential advantage," then an average of the increments, even if we left out the decrements, as the tax does, would be, statistically, a meaningless numeral, save that it might have a use in giving the government a clue to the possible revenues. From the point of view of the individual tax payer all that can be considered is how much his land, not all or other land, is likely to increase in value and hence what the tax will be.

What we seek, then, is a method that will permit of the use of any rate of increase in land value. In the examples which follow, which have been more or less arbitrarily selected, to show the method by illustrative applications, we have assumed that a given piece of land increases in value: (1) slowly, by 10 per cent once every seven years, and (2) rapidly, by doubling every seven years. The assumption of a regular and periodic increase is made merely for the sake of simplicity in the illustration. An irregular, jumpy increase if such be anticipated can be treated just as well by the same method. No particular significance attaches to the choice of a seven year interval for the readjustment of rents. Any of the other intervals common in leases would do as well. But the assumption of seven years was suggested first by the common rule o' my thumb of real estate dealers in California that " it will not pay to

hold land unimproved unless it doubles in value every seven years." [1] It was further suggested by the fact that seven and multiples of seven occur frequently in the terms of British leases. We might smooth out the increase and assume that it accrued regularly throughout the period instead of in a lump at the end. But what might be gained in prettiness of formula would be accompanied by a loss in getting away from the facts of business life. The assumptions made correspond to things which do actually occur sometimes.

In like manner the choice of an interval between "occasions," to be used in the examples, must be a matter for each individual land owner to decide for himself as related to the effect of the tax on his land. If he is holding land to sell, he would calculate the interval on the basis of his expected turn-over period. If he is holding the land as part of his estate for his heirs, the interval to be considered has some relation to his expectation of life. The British act contains certain provisions which seem to imply that it was anticipated that there would be an average interval between occasions, or at least between unavoidable occasions, of something less than thirty years.[2] So in our examples we have chosen the nearest multiple to thirty of our seven year interval between revaluations, namely twenty-eight years.

There is one other important assumption that we have had to make to obtain definite figures for our illustrative examples and that concerns what the English economists who have written on this subject have

[1] The rule seems to be based on the assumption that the investment should earn 10 per cent, compounding to cover interest, taxes, expenses, and a profit.

[2] For an interesting summary of the views of many statisticians as to the proper "multiplier" to be used in ascertaining the total heritable wealth of a country, from the estates paying the estate duty each year, see Stamp, British Incomes and Property, pp. 407 ff.

called the " business horizon " in time. There seems to be a general acceptance in the business world of the idea that land values cannot go on increasing forever, or, if not that, an acceptance of the idea that very remote increments are too far away to be reflected in any present values. Practically there is a limit of vision, or an horizon in time, as to the increases in land values which anyone is willing to take into consideration and pay for now. This does not rest solely on the fact that very remote payments have little present value. The present value of a payment to be received a thousand years hence is very nearly nothing by strict calculation. But the business man is too nearsighted to see as far as the mathematical vanishing point. His vision has a vanishing point that is but a very little way off. We have chosen as the " horizon " in our examples a point of time twenty-eight years hence.

A word of warning must be sounded as to the substitution of other figures and that is that the " horizon " may not safely be placed very far away in the future. This is because the formula underlying the computation shows an uninterpretable infinite value if we assume that the increment goes on forever, provided, the rate of increment taken be one which is more rapid than the increase by interest, compounded, at the rate chosen for capitalizing the rents. In fact, generally speaking, the numerical results obtained by using a distant horizon are of no more practical value than those which are obtained by calculating, for example, how much a penny would amount to at compound interest since the time of our Lord.

There is still one other feature of these taxes that we must bear in mind and that is that on account of the exemption of a part of the increment, the exemption being measured in terms of the original, or last preced-

ing, value, the shorter the interval between occasions, other things being equal, the less the tax, and conversely. The nimble land speculator, turning his land over at short intervals avoids all these taxes. Yet this, or its equivalent is the only form in which a real exemption can be granted, for any exemption computed on the increment itself is, in effect, merely a change in the rate.

As our first illustration, or example, we may take the case of a landowner who confidently expects that his rentals will increase by 10 per cent (compounding, as it were) at the end of every seventh year. He does not at present intend to sell his land but to hold it as part of his estate, and hence assumes that the tax will be paid on the occasion of his death which, according to our assumption, as above explained, he sets down as likely to occur some twenty-eight years hence. If he does sell before that time the tax will be less, provided his estimate of the future prove correct, or he will sell in order to harvest some "windfall" which is, of course, a matter on which no one can calculate. Let us assume further that he reckons interest at 4 per cent, and makes his calculations on the basis of one dollar a year rental from the site value of the land. He might, then, be supposed to calculate somewhat as follows:

"I am to receive (*a*) \$1.00 a year for the first seven years; then (*b*) \$1.10 a year for the second period of seven years; then (*c*) \$1.21 a year for the third period of seven years; then (*d*) \$1.331 a year for the fourth period of seven years. At the end of the twenty-eighth year I shall pass on a property yielding (*e*) \$1.4641 a year and worth then, as a perpetuity, \$36.60. The rentals may continue to increase after that, but twenty-eight years is a long time and I cannot now bank on any further increase. But it is practically certain that at

the end of the twenty-eighth year my estate will have to pay a tax on the increment. This tax will be equal to one-fifth of the difference between the future value \$36.60 and 1.10 times the present value." How will he determine the effect now of that tax to be paid twenty-eight years hence?

The present value at 4 per cent interest of the series of annual payments (*a*), (*b*), (*c*), and (*d*), above set down, assuming them to be received each at the end of the year, together with the present value of (*e*) the \$36.60 to be received twenty-eight years hence, is \$30.924, disregarding the effect of the tax.[1] The future value of the land, namely, \$36.60 will be in no way affected by this tax, altho it may when the twenty-eight years roll around be affected by some future tax then foreseeable. But if there is to be a future tax of the same character as this one, there will be a future increment then foreseeable and we would have a different value for the land unaffected by the tax, since the value of the new increasing series of payments will be greater than \$36.60. The possibility of getting more than \$36.60 twenty-eight years hence is a gamble, which is beyond the horizon now. All that can be definitely considered now is that \$30.924 is the present value of the land, if there were no tax. But this sum will be reduced on account of the anticipated tax by the amount which if put at interest will equal the tax in twenty-eight years; or, what amounts to the same thing, we might consider each of the payments in the series reduced by

[1] At the risk of explaining what may be obvious, we may say that at 4 per cent this \$30.924 is the sum of the amounts which put at interest today will equal \$1.00 a year hence, \$1.00 two years hence, \$1.00 three years hence, and so on for seven years, plus the sum of the amounts which put at interest will equal \$1.10 at the end of the eighth year, the ninth, etc., and so on for each of the four periods, together with the sum which put at interest today will equal \$36.60 twenty-eight years hence. Since any sum put at interest at 4 per cent will very nearly treble in twenty-eight years, the sum necessary to put at interest today to amount to \$36.60 in twenty-eight years is about \$12.20.

the premium necessary to insure against the loss, that is the tax, to occur twenty-eight years hence. That sum at 4 per cent interest is about one-third of the tax. Hence the present value that we are seeking is \$30.924 less one-third of the tax. We have then two unknown, but related quantities, the present value and the tax, and two known quantities, the present value unaffected by the tax, or \$30.924, and the future value, or \$36.60. Let us call the unknown quantities x and y, in the order named. Then we can set up two equations: $x = \$30.924 - \frac{1}{3}y$; and $y = \frac{1}{5}(\$36.60 - 1.10\,x)$. Substituting and solving we find $x = \$30.74$ or the present value: and $y = \$0.557$, or the tax, the present value of which is \$0.1856.[1]

[1] It may be of interest to present the formula in more general terms. The general principles are those for computing investment values, which are to be found in such texts as Skinner's Mathematical Theory of Investment, and others.

We start with the problem: to find the present or capital value, at a rate of interest i, of an income which is periodically increased at the rate k. Let the income increase at the end of every nth year. Assume all incomes to be paid at the end of the year.

The value of an income of \$1.00 per annum for the first n years is $v + v^2 \ldots v^n$. During the next n years the income is $1 + k$ and the value is $(1+k)\,(v^{n+1} + v^{n+2} \ldots v^{2n})$. In the third period of n years the value is $(1+k)^2\,(v^{2n+1} + v^{2n+2} \ldots v^{3n})$ and so on.

The total income is then: $V_1 = (v + v^2 \ldots v^n) + (1+k)\,(v^{n+1} + v^{n+2} \ldots v^{2n}) + (1+k)^2\,(v^{2n+1} + v^{2n+2} \ldots v^{3n}) \ldots$ etc.

Taking out the factor $(v + v^2 \ldots v^n)$ we obtain a series in geometrical progression, like $1 + a + a^2 \ldots a^n$, the sum of which is $\frac{1 - a^{n+1}}{1 - a}$.

Now if a is less than unity the limit of this sum, as n approaches infinity, is $\frac{1}{1-a}$ and must always have a finite value, but if a is greater than unity the value is infinite.

It follows that when k per annum is less than i per annum, the series, assuming the increase in value to continue forever at the same rate, has a finite value, which is: $(v + v^2 \ldots v^n)\left(\frac{1}{1 - \frac{1+k}{(1+i)^n}}\right)$. But if the assumed increment k to be added at the end of n years is so large that it exceeds the accumulated interest at the rate i for n years, the value of the sum of the series is, under the same assumption as before, infinite.

In any practical problem, one would use only a part of the series up to the year of the first occasion for the imposition of a tax, or the year, m, or else up to the year of an assumed horizon, h. That being the case knowledge of the formula for the limit of the sum when n approaches infinity, is of little assistance for abreviating the work, which can, of course, be easily done by the help of interest tables.

The solution after V_1 is obtained is as follows. One computes also the value of V_2, or that of a similar series beginning at the date of the first occasion. Then:

The reduction in the present value caused by the tax is, in this example, six-tenths of one per cent of the value unaffected by the tax.

Of course, a 10 per cent increase every seven years is not a very rapid rate of increase. Let us therefore try the same problem with the assumptions otherwise the same, but using an increase of 100 per cent every seven years, which is possible in certain localities. The results obtained are, for the present value as depressed by the tax \$169.18. The value untaxed would be \$183.45. The tax would be \$42.78, which has a present value of \$14.26, and the reduction caused by the expectation of the tax is 7.77 per cent of what the value would be if there were no increment value tax.

These two illustrations may suffice to show the method. They also show that the calculable effects of the tax on the present value are not very great, even when the rate of the increase in value is very rapid. What causes so much alarm when such taxes are proposed is doubtless to be found among the non-calculable factors. Perhaps it lies even more in the possibility of other and more severe taxes on land and the evidence of a possible intention to make a fundamental change in the institution of private property in land.

Let X = the present value as affected by the tax. Let T = the tax; r = its rate; e = the exemption; and m the year of the first occasion.

Then $X = V_1 - \dfrac{T}{(1+i)^m}$;

And $T = (V_2 - (1+e)X)r$;

Hence $X = \dfrac{V_1 - \dfrac{rV_2}{(1+i)^m}}{1 - \dfrac{r(1+e)}{(1+i)^m}}$.

IV. Comparison with the Results of the General Property Tax in the United States

We may now proceed to make a numerical comparison of these results with the effects of the general property tax in parallel cases. In doing so we must bear in mind certain propositions relating to the increment value land taxes which have been stated above. These are: (1) If there be an exemption in the form of a percentage of the base or original value, the more frequent the "occasions" the less the revenue obtained by the government. (2) Even if the tax is 100 per cent of the increment and there be no exemption allowed it will not wipe out the entire present value of the increment regarded as the property of the owner, because the tax is not payable for years to come, and in the meantime the owner has the use of the increases in the rentals. Thus even in our second example where the increase is rapid and the tax large, a tax at 100 per cent of the increment, and with no exemption, would still leave a present value of \$75.10 for every \$1.00 of present income (as against \$183.45 untaxed) of which \$55.10 is attributable to the enjoyment of the increment in the interval before the tax is to be paid. (3) The tax receipts will necessarily mature very slowly, and will come in very irregularly.

The tax receipts and values under the general property tax on the two pieces of land used in the two examples may now be stated. In the first example, we assumed a piece of land increasing in value at the rate of 10 per cent at the end of each period of seven years. If the rate of the property tax be assumed to be one per cent on the capital value of the owner's interest or share, and that value be taken to be twenty-five years

purchase of the ground rental less the tax, then the government has a permanent share always equal to one-fifth in the property. The original \$30.924 which we found above, or the value of the land per \$1.00 of present income or ground rent, is thus divided and the share of the owner is \$24.739, while that of the government is \$6.185. The owner's share in the increment alone has a present value of \$4.739 (\$24.739−20) and the government's share in the same, a present value of \$1.185 (\$6.185−5). It appears, then, that the government's share under the general property tax, or \$1.185, in the increment alone is six and four-tenths times as large as it would be under an increment value land tax of the sort used in our example, which in the parallel case was \$0.1856.

Again applying the same method to the second example the present value of the two interests combined is as before \$183.45. The private owner's share is \$146.76 and the government's share, through the general property tax, \$36.69. The owner's share in the increment alone, has a present value of \$126.76 and the government's share has a present value of \$31.69. The latter is two and two-tenths times the present value of the government's interest under the increment value land tax which was found above to be \$14.26.

The comparison here instituted is kept strictly to the effects on the increment values only. There is of course the further effect that the property tax depresses the original value disregarding the increment. This is important if we anticipate that the rates of the general property tax will increase, for the value of the original investment is often large as compared with the increment value. It may be objected that we have used a fairly stiff rate for the general property tax, but since the differences found are so large the main statement

that the general property tax is likely to impose a larger burden on the increment than the increment value tax alone is still true, even at lower rates, within reason, for the property tax.

Summarizing the results and adding the effects of combining both taxes we have the following:

Example I. Land Value Increases 10% Every Seven Years	
Value of the land, untaxed, per $1.00 present income	$30.924
Value of owner's share under the increment tax only	30.74
Value of owner's share under the property tax only	24.739
Value of owner's share under both taxes combined	24.592
Value of government's share, increment tax only	0.1856
Value of government's share, property tax only	6.185
Value of government's share, both taxes combined	6.332[1]

Example II. Land Value Doubles Every Seven Years	
Value of the land, untaxed, per $1.00 present income	$183.45
Value of owner's share under the increment tax only	169.18
Value of owner's share under the property tax only	146.76
Value of the owner's share under both taxes combined	132.34
Value of government's share, increment tax only	14.26
Value of government's share, property tax only	36.69
Value of government's share, both taxes combined	51.11[1]

We have now finished the task we set ourselves and found the back that bears the burden, and how to measure that burden. The far greater task of interpreting the results in terms of social and economic well-being remains for others or for some future effort.

Carl C. Plehn.

University of California.

[1] The third figure in each example for the government's share is not the sum of the two above it, because the general property tax alters the relation between the present and the future values after deduction of the 10 per cent exemption so that the proportion of the increment value tax is different.

FIXED COSTS AND MARKET PRICE

SUMMARY

Significance of cost analysis for economic theory, 507. — Analysis of commercial costs, 508. — Bearing on price policy, 511. — Devices resorted to: brands, coöperative arrangements, 511. — Analysis of manufacturing costs, 514. — Machine rate analysis, prime cost, additional cost, 514. — Endeavor to avoid cutthroat competition, by consolidations, associations, brands, uniform accounting, 517. — Competition in foreign markets, 520. — Conclusions, 521.

During the last decade there has been a common apprehension among economists that the old economic man needed to be somewhat more definitely defined and that the progress of economic science would be greatly promoted by an elucidation of our assumptions in regard to motivation. No one has seemed to understand that the effectiveness of economic science was limited more by the inadequacy of its analysis of cost than by the nature of its analysis of demand. Practically all the laws of economic science have been closely related to cost of production analysis. The latter occupied the center of the stage not only for the classical economists, but for the writers of our economic texts. It is a fair prediction that for many decades the analysis of cost will continue to be the more important element in the attempt to explain business enterprise. It is the purpose of this paper to show how a classification of costs different from that commonly employed will throw light on the nature of competition and the adjustment of market prices. The *income account* supplemented by

the *machine rate* of modern cost accounting is to be the instrument of analysis employed for this purpose.

The ordinary income of a commercial business may be analyzed for the present purpose as follows:

SUGGESTED FORM FOR PROFIT AND LOSS STATEMENT

Sales			
Furniture..............................		.....	
Less Returns and Allowances........		.....	.....
Carpets................................		.....	
Less Returns and Allowances........		.....	.....
Total Net Sales			......
Cost of Goods Sold			
Furniture Inventory, first of period	.....		
Net Purchases of Furniture..........	.....	.....	
Less Inventory, end of period		.....	.....
Carpet Inventory, first of period	.....		
Net Purchases of Carpets...........	.....	.....	
Less Carpet Inventory, end of period..		.....	.....
Freight-In on Furniture and Carpets.....			.....
Total Cost of Furniture and Carpets Sold.........................			......
Gross Profits from Operations......			......
Other Income			
Net Returns from Repair Department....		.....	
Net Profit from Consignment Sales......		.....	.....
Discounts on Purchases...............		.....	
Less Discounts on Sales.............		.....	......
Total Other Income..............			......
Total Income (Add Gross Profits and Other Income)..................			.....

Expenses		
Advertising	.....	
Rent	.....	
Salaries	.....	
Interest	.....	
Fuel	.....	
Freight-Out	.....	
Operation of Auto Truck	.....	
Operation of Wagon Truck	.....	
Expired Insurance	.....	
Sundry Expenses	.....	.....
Net Profits		.....
Interest on Partners' Capital		.....
Balance Earned on Capital		.....

There would be some difference of opinion among accountants as to whether the statement is satisfactory for all purposes. It will, however, serve for the purposes of this paper and is, in form, practically the same as those found in some of the modern accounting texts. Let us now raise some questions about the relation of the several items of cost to the sale price of the product.

The *cost of goods sold* is a cost which varies directly with the volume of sales. In the case of staple goods there would ordinarily be nothing to gain in the sale at a price which would not cover this class of costs. In the case of style goods, which can not be carried over safely from season to season, it might pay to sell below cost to avoid a loss of the purchase price. If staple goods were threatened with a violent decline in prices there might be sales below this cost if the prospects indicated that the sale price for the retailer would go below the cost price. There would be a sale at a loss to avoid a further loss. Retail prices, however, do not ordinarily fluctuate rapidly, and it is not common for a dealer in staple wares to sell his commodity below cost. The large department store may cut the price of a staple commodity below

the *cost of goods sold* as an advertising device. The purpose, however, in so doing is to sell style and specialty goods, which would not otherwise be sold, at a price which will result in a larger gross profit than would be secured without the price cutting. It will be the aim of the merchant to insure at all times that the per cent of gross profits on total sales will be high enough to yield the maximum of gross profits considering the expenses to be incurred.

Now let us examine the nature of the outlays included under the caption of *expense*. Rent, interest, insurance, and a part of the salary outlay will be incurred with a comparatively small volume of sales to the same extent as with a larger volume. Assume a given space for the store and a given investment for equipment, these expenses will be approximately the same in seasons of dull business as in seasons of active business. Let us for convenience call such expenses *fixed expenses*. Let us then call those expenses incurred in getting additional business, *additional expenses*. In commercial business the *fixed expenses* are small when compared with the total of *cost of goods sold* plus *additional expense*. Yet they would in many cases constitute 50 to 75 per cent of *expenses*. The bearing of these *fixed expenses* on competitive bidding, large even in commercial business, is far more important in manufacturing enterprise.

// Let us suppose that the merchants in a given line of trade are selling an amount of goods which yields a net profit amounting to a fair return on the investment involved, a return at least equal to that which they suppose might be obtained in any other business that might be followed. Each has a volume of business fairly proportionate to the amount of equipment involved. There will be no temptation to cut prices when times are good

and all are handling as much trade as their facilities will justify. Now let us suppose that the advent of a new competitor into the field, or some other cause results in a decrease in the sales of each of the old merchants. Each will desire to increase his volume of business. If a new customer can he had at prices above the *cost of goods sold* plus *additional expense* it will pay to reduce prices to that point even though the *fixed expenses* are not covered. The *fixed expenses* are incurred anyway and are not increased by the additional sale. They are reduced per unit of merchandise by the sales of the character indicated, even though selling all goods at such a price would ultimately result in receivership or bankruptcy. When price cutting results in an increase in the volume of sales, a merchant whose sales are low can afford the reduction in price so long as the reduced price slightly more than covers the cost of goods sold and the additional expenses of the sale. The *fixed expenses* are not included in the necessary price of the additional sale because they are incurred even if the sale is not made.

The reader will reply that this would be an unwise price policy. The merchants themselves also urge that this is an unwise price policy. Yet one is forced to conclude that without coöperation this remission to the consumer of the major part of *fixed expenses* cannot be avoided. Since an individualistic attitude forces the kind of competition which may be called cutthroat competition, devices must be found to avoid this free competition. The chief device resorted to for this purpose is the handling of different brands. If one clothier handles the *John Brown* clothes, and his competitor handles the *Rogers Peet* brand, there then can be no close comparison of prices. Sales will be made on a style and quality basis, and the temptation to price

cutting will be largely removed. Trade agitation against price cutting is carried on to protect the staples, but regardless of all this agitation the margin of profit for such commodities is comparatively small and every merchant is trying to increase the number of his specialties.

Even in the case of staple commodities it is possible for the various sellers to effect a coöperative arrangement if the number of competitors is small. The retail lumber dealers in small cities ordinarily have some understanding in regard to a coöperative basis of prices. But the difficulty of establishing a coöperative basis for prices increases with an increase in the number of competitors. If in a field of enterprise in a given competitive area the amount of original investment per establishment is large, there ordinarily will be but few competitors. In such lines of business, a coöperative understanding is most probable. In such concerns, the fixed expenses also will be large, and the need of a coöperative arrangement the more urgent. In those mercantile lines where fixed expenses are large and the commodities are staple the dealers are more readily induced to embark upon a policy of destructive competition. The remedy for the evil is coöperation. Merchants and manufacturers, especially those whose fixed expenses are large, prefer specialties because their sale involves less temptation to undersell. The consumer of specialties has no decisive basis for comparing the prices of various dealers. In the case of such articles underselling is not an effective instrument in increasing the volume of sales. Another means frequently employed to avoid the underselling which large fixed expenses would foster is found in the use of the exclusive agent. This selling arrangement is a complementary organization designed to make special brands more

effective in accomplishing this purpose of preventing destructive underselling. Even a branded good, if in the hands of many retailers in the same community, would be subject to underselling for the same reasons as those referred to in the case of the staple commodity. If the branded good is comparatively expensive and consequently does not fall into the large class of inexpensive convenience goods, the case of exclusive agents may serve effectively to prevent selling below cost. Oak filing cabinets, typewriters, and refrigerators are well known examples of this class of goods.

Cutthroat competition has, however, been of small consequence in mercantile lines in comparison with its far-reaching effects in the manufacturing field. Here the fixed costs are large and as a result, the underselling has been severe. To aid in the exposition of the situation in manufactures, it will be worth while to present an example of the somewhat more elaborate statement of costs used by manufacturing concerns.

The form on the following page will serve to indicate the character of the statement which generally has been found satisfactory in manufacturing concerns not employing the machine rate computation.

The statement above makes entirely satisfactory provision for all the items entering into *prime cost.* The ascertainment of *prime costs* in manufactures is comparatively simple. The bearing of it on sale price is similar to that of *cost of goods sold* in the case of the commercial statement. Raw materials are not generally style goods, so that they can readily be carried forward from season to season. *Prime costs* are not ordinarily, however, so large a percentage of total costs as *cost of goods sold* would be of total costs.

The large amount of expense or *manufacturing expense* in a factory business makes it urgent that a device

Form for Annual Manufacturing Statement

Prime Cost				
Inventories, April 1, 1914				
Raw Materials at cost..........		.....		
Goods in Process..............		.....		
Purchase of Materials............		.....		
Direct Labor for Period............		.....	.....	
Inventories, March 31, 1915				
Raw Materials at Cost..........		.....		
Goods in Process..............		.....	.....	
Total Prime Cost..................				.....
Manufacturing Expense				
Indirect Labor..................		.....		
Heat, Light, and Power.........		.....		
Depreciation:				
Buildings....................	.....			
Machinery....................	.....			
Patents, etc.................	.....	.....		
Supplies and Expense, Inventory, April 1, 1914.................		.....	.....	
Less Supplies and Expense, Inventory, March 31, 1915.........			.....	
Total Manufacturing Expense				.....
Total Cost of Mfg. of chairs..				......

be found for its proper distribution in the computation of the cost of each article produced in a given factory. This manufacturing expense is variously called overhead, burden, indirect expense, shop charges, or manufacturing expense. For brevity it will be called overhead in the remainder of this paper.

The machine rate is a device commonly employed by large concerns in the distribution of this overhead.[1]

[1] The elements of the *machine rate* used by A. Hamilton Church, one of the first men to set forth the importance of the device, are indicated in the table on page 515:

Professor Cole has given a machine rate analysis particularly useful for the purposes of this paper.[1] He has divided overhead or manufacturing expense into the following categories: (1) space costs, (2) machine costs, (3) machine-use costs, and (4) power costs. Space costs and machine costs are incurred as a result of operation. Power costs are also incurred to some extent as a result of operation. In order to cover these types of cost, Professor Cole suggests a *minimum rate* and an *additional rate.* The additional rate covers the cost per hour of running in excess of the cost that would be incurred if the machinery were idle. When the machinery is idle the cost per hour is covered by the minimum rate. When it is in operation the cost per hour includes both the minimum and the additional rate.

The analysis above indicates the importance of *minimum rate costs* or *fixed costs* in manufactures as distinct from *additional rate costs* or *additional costs* and the instrument employed for their determination and distribution. It also serves sufficiently to indicate the character of the concepts involved, so that their appli-

Shop-Charge Account — January

Debit:		Credit:	
Interest on machines	$53.00	Machine earnings	$576.00
Depreciation on machines	53.00	Being total of amount distributed to jobs by means of new machine rates this month.	
Power	100.00		
Wages on automatic machines	75.00		
Process Sundries (oil, etc.)	45.00	Undistributed balance	100.00
Debit for floor burden	250.00		
Supervision (general)	100.00		
Total debit	$676.00	Total credit	$676.00

Total hours of work during month, 4,400.

Supplementary rate equals $100.00/4,400, or 2.27 cents per hour.

The items on the debit side above are the ones to be distributed. The items on the credit side and the notes below the table indicate the method of distribution. On the supposition that a machine or a given productive center will run a certain number of hours per year, one can fix an hour rate for the machine or machines that will cover a group of fixed expenses for the period such as those found on the debit side above. If the machine is not constantly employed, some of the expense concerned will not be distributed. Church's method is to add the undistributed expense by means of a supplementary rate at the end of the period.

[1] W. M. Cole, Accounts, ch. 19.

cation to competitive cost analysis may readily be discerned. The fixed costs are by far the larger part of overhead costs in manufactures. They might in some cases amount to approximately 50 per cent of the total manufacturing cost.

In times of active business it would be easy for a manufacturer to charge a price which would cover prime costs, fixed costs, and additional costs. If the demand were such that it not only kept all machinery active but also exceeded the total output of the machinery in full operation, the price of the factory output might go considerably above a figure that would yield a fair return on the investment. But in dull times the demand might fall off to such a point that the full time operation of machinery would not be required to supply the current demand at a price covering total costs. The question arises as to the principles governing price cutting under such circumstances.

To present complete costs for the purpose of computation, the factory cost statement must be supplemented by a commercial statement showing merchandising costs, such as that given in the first part of this paper. Complete costs, so stated, would then be the *prime costs, the fixed factory costs* plus *fixed merchandising costs, and the additional factory costs* plus *additional merchandising costs.* For convenience, *fixed costs* will be used to indicate both kinds of fixed costs and *additional costs* both kinds of additional costs.

When the lack of business means idle machinery for a factory, it pays to produce for any price above prime costs plus additional costs. Fixed costs involve loss during idle periods and any income in excess of the prime plus additional costs tends to reduce by that much the loss that would otherwise accrue. As a consequence the same principle applies to factory prices in

dull times which applies to railroad rates of parallel lines in times of depression. The financiers discovered many years ago that it was a hazardous venture to undertake to finance a railroad building a line in direct competition with an existing line. The result of such competition would ordinarily be a receivership for both. It was the fixed cost item in railroading which caused competition to be disastrous and brought about such cooperative rates that they virtually are under the supervision of the Interstate Commerce Commission.

It is not so commonly recognized that precisely the same cost factor forced the consolidation of competing steel plants into the United States Steel Corporation and at the same time forced consolidations in many other lines of industry. Consolidations have frequently had as their avowed object the reduction in costs which is supposed to result from large scale production. There is doubtless some truth in this, but students of the consolidations since 1890 ordinarily conclude that the character of the price competition which prevailed also had much to do with the consolidations. No one, however, has clearly set forth the bearing of the various cost factors on the character of the competition which invariably accompanies a depression in business.

Even after extensive consolidations had been effected in various industries there was difficulty in preventing a recurrence in these industries of the cutthroat competition of which the consolidations were a result. The devices employed to avoid its recurrence have been somewhat similar to those already referred to as existing in the retail trade. In fact, it was the factory owners who discovered how to save the retailer and save themselves at the same time.

In the first place, associations have been formed in various fields of manufactures. Through these associa-

tions there was created a certain *esprit de corps*, which developed a feeling in favor of fair competition. If the commodity concerned was of staple character, there would be a tendency to follow the price schedule adopted by the controlling factor in the trade. If a large company sold steel rails at $28 per ton there would be a general acceptance of this price on the part of the small number of competitors still in the field. The ease with which such a coöperative practice can be established is roughly in inverse proportion to the number of competitors.

Where the staple character of the commodity can be modified by the production of different brands, the coöperative relation is much more secure. It is very difficult to prevent cutthroat competition among the producers of ordinary salt because it is not possible, here, to use a variety of brands to good effect. Similarly, it takes a strong consolidation in the sugar industry to prevent the occurrence of cutthroat competition. Altho the use of a variety of brands is not practicable in the steel industry the larger initial investment required for successful operation and the smaller number of competitors render it less difficult to prevent underselling.

The style tendencies in shoes and dress goods are to some extent an outgrowth of the requirement of specialties to prevent cutthroat competition. As soon as a given style of dress goods is standardized its production is placed on a very close profit margin. The tendency of the factories is to discover dress goods that will give them a specialty and remove them from the baneful results of cutthroat competition. A similar situation in the shoe industry results in a constantly shifting variety of styles. The competition must be placed on a style and quality basis regardless of the cost of develop-

ing a market for a new style. The new style is essential for the purpose of avoiding destructive competition.

The typewriter industry has developed another device for reaching a coöperative basis. The number of competitors was not so large that it was impossible to create a satisfactory situation in the market for new machines. But the number of dealers in second-hand machines was large and the character of the competition was dangerous. It was possible, however, by means of the number series to tell the age of a second-hand machine. The discounts on old machines can be based on their age, and the publication of the list of discounts graded in this manner serves to establish a basis of competition which does not demoralize the market.

The automobile industry furnishes an example of still another means of avoiding destructive competition. Not only must a new machine be a new brand or model, but it has a still better chance if it is made to sell at a price which will fill a rather large gap in the price range of existing machines. When the Dodge Brothers wished to compete with Ford, they did not make a car that would sell for the same price as the Ford car. They made a car of a different model and a different price.

The associations of job printers have been particularly active in promoting a uniform cost accounting plan. They have also established a rule that no one shall bid for a job at a price which will not fully cover overhead as well as prime costs. The job printers are in dire need of a coöperative basis because of the comparatively large investment in machinery and the resulting large fixed costs. If the job printers in a given locality are few it should be possible for them to get together on some such arrangement as the cost basis of bidding.

By the devices above mentioned and others of a similar character the domestic market may be so organized

as to remove the more dangerous causes of destructive competition. But this does not suffice for the foreign markets. To avoid idle machinery in dull times the factories of the various nations resort to "dumping." If protected, by a domestic tariff or otherwise, against reimports, they can afford to sell in the foreign markets at a price which will cover little more than the prime cost plus additional costs. The fixed costs, which include the major part of the overhead, need not be fully covered. This cutting of prices in a foreign market is less hazardous than it would be in the domestic market, because it is thereby made possible to sell the additional output at a lower price without demoralizing the home market. It may be pointed out, however, that this tends to demoralize the foreign market. Where the competitors for foreign trade are located in the same country they have frequently succeeded in bringing this foreign trade to the same coöperative basis as that reached for domestic trade. There is still no possibility, however, of preventing the factories of a given nation from resorting, in coöperative agreement among themselves, to cutthroat competition in foreign markets with the factories of another nation. This is substantially what has been occurring in connection with the exploitation of the foreign trade markets. A given country can largely safeguard its own factories by a protective tariff. But if there is competition between two of the leading commercial nations for the trade of some third country, there is no way of preventing cutthroat competition except by international conventions and agreements or by agreements between the respective groups of industrials in the several countries.

It should be pointed out further that the reduction of prices to a point at which they are inadequate to cover the major part of fixed costs is least damaging to

the concern for which foreign trade is a side line. Such a concern can substantially reduce its losses from idle overhead, while keeping the greater part of its trade free from danger of demoralization through cutthroat competition.

Fixed costs also have a close relation to the question of side lines in domestic trade. The side line is one of the standard methods adopted for the employment of machinery which would otherwise be idle. In this way a factory demoralizes the market for some other commodity than the one to which its productive equipment is chiefly devoted. The manager of a factory producing foundry machinery a few years ago added to its list of products a side line in hand cars or pushcarts, which it produced in dull times at low prices for the purpose of reducing the loss in overhead from idle time. The overhead has a distinct bearing on the market risk in commodities subject to side-line production, and this makes the competition in such commodities more dangerous than in other types of commodities.

Many economists have discussed the significance of "joint costs" and have attempted to define them. The cost of a by-product commodity, so long as it is a side line and the articles to whose production the factory is chiefly devoted are produced largely by factories not employing the side line, is the additional cost involved in its production over what would have been incurred without producing the side line. Other refinements on this point could be brought into the discussion, but a detailed excursion into the theory of joint costs would be going too far afield.

There is another type of by-product or side line, which should be associated not so much with idle machinery or fixed machine costs as with other fixed overhead. This can best be described by a reference to the situation

found in the marketing of farm machinery. In order to market binders and mowers over the country as a whole, the producers of these articles found it necessary to build up a large selling organization. When this selling organization was once created, it was possible to add other lines which could be sold through the same channels with comparatively small additional overhead. The result was that the company added one side line after another until it had a line which would tax its plant to capacity. It was selling all that it could sell through the given organization without an unreasonable enlargement of overhead expense. The government report showed that the company was making a smaller profit on the side lines.[1] It could afford to produce the side lines without charging a large portion of the overhead against them because their production and marketing did not involve a large addition to overhead.

What has been said above will suffice to show how general are the influences of the category of fixed costs on competitive price. In the initial stages of any enterprise the cost computation would include fixed costs as a part of the costs to be covered by market price. The cost computation made at such a time would correspond rather closely to the normal cost category in some of the current economic analyses. But when an enterprise has been launched this normal cost can no longer be the determining factor in the retention or elimination of the launched enterprise. It is this factor which makes the entry of a new plant into a competitive field particularly hazardous. If at any time the various competing plants have a demand which is insufficient to take the supply of the existing plants at their full capacity a new cost computation arises which tends to reduce market price to a figure that will cover less of the fixed costs.

[1] See Report of the Bureau of Corporations on International Harvester Co., p. 243.

The demand for the output of factories is subject to great fluctuations. The rate of saving along with a considerable degree of freedom for productive enterprise has brought into practically all the fields of manufacture more plants than can be kept running at full time capacity from year to year. For the greater part of the time there is not a full employment of the equipment and organization of industrial enterprises. Many of these plants have doubtless come to rely on the possibility of avoiding the cutthroat competition which would undermine their stability, through reliance on some form of coöperation or on some device which will shift the competition to a style or brand basis.

The influence of fixed costs on market price can not, therefore, be regarded as a factor causing merely temporary divergences from what has been called normal cost. On the contrary, the presence of fixed costs as a significant fraction of total costs tends to modify for an indefinite period of time the character of competition. If fixed costs are large there must be a style or brand competition on the one hand or, on the other hand, consolidation of producers similar to that which took place in the steel industry, in the railroads, and in various large-plant industries producing goods of a comparatively staple character. The ordinary supposition in regard to cost computation under free competition does not allow for a production of goods below cost when the producers anticipate at the time of initiating production that the output is to be sold below cost. The fact that full time operation of industrial equipment is not the normal condition of industry means that ordinarily a group of freely competing machine industries will sell the output below cost and that some degree of coöperation is necessary to secure a scale of prices that will yield an adequate return on fixed investments.

Any attempt to measure the expediency either of the style and brand type of competition or of government supervision is outside the scope of this paper. Much could be said of the multiplication of advertising costs through style and brand competition. The difficulties and dangers of government supervision need not be dwelt on. It is intended here to point out merely that the cause of the appearance of these problems is to be found in the development of cutthroat competition.

SPURGEON BELL.

UNIVERSITY OF TEXAS.

THE OPERATION OF THE MASSACHUSETTS INCOME TAX

SUMMARY

I. The Administration of the Tax

The Massachusetts income tax went into operation in the year 1917, and its results are now a matter of record.[1] As explained in a previous number of this Journal,[2] the administration of the tax was placed wholly in the hands of the tax commissioner, who was authorized to appoint an income tax deputy and to divide the state into assessment districts. The deputy was appointed in the summer of 1916, and by the end of the year an efficient administrative staff had been created, the state being divided into ten assessment districts. During the last months of the year a campaign of publicity was inaugurated, with a view to acquainting the people of the commonwealth with the requirements of the new law. Literature was extensively circulated, and a corps of speakers organized who responded to many calls from various cities and towns. Banks and other similar institutions aided greatly in this campaign by circulating literature and establishing information bureaus for the use of their customers. Finally, the income tax department sent representatives to every city and town at stated times to meet tax-

[1] Report of the Tax Commissioner, 1917.

[2] Quarterly Journal of Economics, November, 1916.

payers and assist them in complying with the requirements of the law.

The result was a very general compliance with the requirement of returns of taxable income. No less than 183,000 [1] returns were received, which meant that the tax was enforced strictly upon the basis of sworn returns by tax payers, and not by official estimates. As was natural in the first year, many of the returns were defective, and the income tax department was put to a great deal of labor that will probably not be required in the future. In general, it was evident that the people were attempting to comply with the law, and that coöperation between the taxing authorities and the taxpayers had been secured to a very large extent. Up to January, 1918, about 9000 delinquents were rounded up by the department, and it was then estimated that further search might disclose some 10,000 other cases. These figures seem large; but when compared with the total number of returns received, they indicate that the law was as fully complied with as could have been expected of any similar act in the first year of its operation. There were, of course, many errors resulting from no dishonest intent, and caused in most cases by uncertainty as to the taxable status of stock dividends, shares of voluntary associations, and some other items. There were also about 4000 cases where questions of domicile were raised, but in most of these it was determined that the persons concerned were inhabitants of the commonwealth. Up to January 1, 1918, supplementary investigations made by the department brought in some $300,000 of taxes.

[1] This was many times the number previously received in the state by the United States Internal Revenue Department which had ordinarily received 25,000 returns. Differences in the scope of the Federal and the state tax account in part for the smaller number of returns to the Federal government, but it was noted that in the spring of 1917 the enforcement of the state law resulted in a substantial increase in the number of returns received by the Federal authorities.

The amount of taxes assessed under the new law was as follows:

Tax on interest and dividends	$8,697,503
Tax on business and professional incomes	2,577,061
Tax on gains from dealings in intangible property	836,234
Tax on annuities	24,211
Total	$12,135,009[1]

Up to March 21, 1918, abatements amounting to $140,784 had been granted, but additional assessments made the total tax assessed at that date $12,119,000, of which sum $11,929,000 had actually been collected. Ninety-four per cent of the taxes assessed on September 1, 1917, had been paid by October 15, when interest began to accrue, and three per cent more were collected by November 15. The $189,449 of uncollected taxes outstanding on March 21, 1918, represented approximately one and one-half per cent of the taxes that had been assessed.

The cost of administering the new act was large, but not excessive, and amounted to $301,502. Of this sum, $40,668 had been expended for office equipment and publicity work which were incidental to the establishment of the new system, so that the ordinary cost of administration was $260,834, which represents about two per cent of the amount of the tax that will be collected. Moreover, this figure should be reduced by $36,977, to allow for interest accruing upon income tax balances, so that the net cost of collection can be estimated at 1.86 per cent, a figure which compares favorably with the cost of collecting other income taxes.

[1] Of this amount $462,300 is estimated.

The Financial Results

The yield of the tax materially exceeded the estimates. The income tax act was premised upon estimates, made May 16, 1916, that the six per cent tax levied by the proposed law upon interest and dividends would yield $8,000,000 and upwards, and that the one and one-half per cent tax levied upon business and professional incomes would yield from $750,000 to $1,500,000. No attempt was made to estimate the yield of the three per cent tax upon gains from dealings in intangible property, since there were no data upon which an estimate could be based.

The actual yield, it will be noticed, of the six per cent tax on interest and dividends was $8,697,000, which corresponded very closely with the estimate of $8,000,000 and upward. The tax on business and professional income actually yielded $2,577,000, which greatly exceeded the highest estimate. The yield of the three per cent tax on dealings in intangible property was $836,000. Instead of an estimated yield of from nine to ten millions from the various taxes provided by the act, the law of 1916 has yielded over twelve millions.

These statistics need to be compared with those showing the revenue derived from intangible property and personal and business incomes under the general property tax. The comparison is not easy for a number of reasons. In the first place, intangible property and personal and business income were taxed under the old system by a process of doomage, and in the assessors' returns were lumped with certain items of tangible personal property under the head of "all other ratable personal estate." This item totaled $762,636,000 in the year 1916; and there is an official estimate [1] that, of this

[1] Aggregates of Property, Taxes, etc., 1916, Part II, p. 86.

amount, $112,854,000 represented tangible personal property, $610,774,000 represented intangible personal property, and $39,008,000 represented business and professional incomes. But this estimate probably overstated the amount of intangible property.

The second reason is that in 1916 local assessments of intangible property were greatly increased in a number of cities and towns, purely as a result of the enactment of the income tax act. If that law had not been on the books, personal property in these cases would have been doomed for about the same amount as in 1915. But the enactment of the law freed boards of assessors from the fear of driving wealthy inhabitants out of town, since emigration would not enable tax payers to avoid 1916 taxes and a new system was going into operation the following year. It is, therefore, not fair to make the 1916 assessments of personal property the basis of comparison. In the entire commonwealth assessments of personal property rose from $1,195,098,000 in 1915 to $1,275,754,000 in 1916, an increase of $80,656,000, which was larger than normal.

In the third place, the income tax act provided that no assessment of personal property in 1917 should be reduced below the amount assessed in 1916 unless the taxpayer come forward with a sworn return of his tangible personal property which was all that remained subject to local taxation. The result was that the exemption of intangible property and of income from local taxation could not and did not decrease local assessments as much as it would otherwise have done, which is merely another way of saying that tangible personal property was assessed for considerably more than in 1915. In the entire commonwealth the assessment of personal property declined from $1,275,754,000 in 1916 to $730,591,000 in 1917. Here is a shrinkage of

$545,163,000, which would have been greater if tangible personal property had not been more fully assessed in 1917, and would have been less if assessments of personal property had not been materially increased in 1916 as a result of the passage of the income tax act. How far the two things offset each other no one knows or ever will know.

The income tax act made the year 1915 the point of departure by providing that the revenue from the income tax should be distributed by the state to the various cities and towns on a twofold basis. In the first place, each town was to receive an amount that would, on the basis of its 1915 revenues, compensate it for the loss occasioned by the exemption of intangible property and business and professional incomes. In the second place, any balance remaining was to be divided among the cities and towns in the same proportion that was followed in levying the direct state tax. Upon this basis it was determined that $8,120,621[1] was needed to compensate the cities and towns for the exemption of intangible property and business and professional incomes. And probably this is the fairest basis from which to estimate the financial results of the new law.

The income tax will probably yield in 1917 over $12,000,000 after all allowance is made for abatements, and this is from three to four millions more than intangible property and incomes contributed under the general property tax. The net increase of revenue, however, was somewhat less because the administration of the tax cost in its first year about $300,000.

[1] This figure agreed very closely with that given in the estimate of May 16, 1916. In this estimate it was computed that intangible property contributed from $8,000,000 to $8,600,000 to local taxation in the year 1915.

III. Comparison with the Taxation of Intangible Property under the General Property Tax

The comparison of the amount of interest and dividends taxed under the new law with the amount of intangible property that was probably taxed under the old system may be of interest. The six per cent tax on interest and dividends yielded, as above stated, $8,697,000, which represented an assessment of $144,950,000 of interest and dividends. Under the old system, the estimate of May 16, 1916, indicated that from $500,000,000 to $540,000,000 of intangible property was locally assessed in 1915; and in point of fact the shrinkage in the personal property assessed in 1917 was exactly $545,000,000. It is safe to say, therefore, that under the general property tax, locally administered, Massachusetts assessed property with a capital value of some $550,000,000; while under the income tax, administered by the state, it assessed approximately $145,000,000 of interest and dividends. If we capitalize the interest and dividends at six per cent, we obtain a capital value of $2,400,000,000 of intangible property reached under the income tax in the year 1917.

In this connection it should be taken into account that the income tax act exempted $300 of interest and dividends to people whose total income did not exceed $600, and that this exemption appears to have decreased the assessment of income by about $2,000,000, representing about $33,000,000 of capital value. Moreover, the act exempted trust funds held by a resident trustee for a non-resident beneficiary, which appears to have led to an exemption of $3,300,000 of income having a capital value, at six per cent, of over $50,000,000. It is further to be remembered that the six per cent rate of capitalization adopted in this calculation tends to under-

estimate rather than overestimate the capital value of the intangible property reached under the new act. If the net result is stated in terms of capital values, Massachusetts can claim to have increased the assessment of intangible property from $550,000,000 to $2,400,000,000 in a single year, and that, too, in spite of exemptions amounting to more than $80,000,000 more.

The act has so far occasioned little litigation. In the case of Trefry *v.* Garfield (227 Mass. 522), the Supreme Court of Massachusetts held that stock dividends, stockholders' "rights," and dividends earned prior to 1916 were taxable. In the later case of Falkner *v.* Trefry the court held that the act did not apply to income received in 1916 prior to the death of a person who died in November. Only two other cases are pending at the time of writing.

The recently issued report of the State Tax Commissioner declared that the act of 1916 has given general satisfaction.[1] It states that the wealthy are now paying more than they did under the old system, while persons of small means have received exemptions they did not formerly enjoy. It notes that the law has brought an incidental benefit to many people who have been obliged to install better systems of bookkeeping than they formerly employed, and reports that the tax department is aiding taxpayers, without charge, in installing simple but adequate bookkeeping systems. It concludes: "Both from the point of revenue and the public's satisfaction, the law has proven a decided success. An equitable tax has been substituted for one that was driving wealth from the state."

CHARLES J. BULLOCK.

HARVARD UNIVERSITY.

[1] Report of Tax Commissioner, 1917, p. 19.

REVIEWS

THE TOWN LABOURER [1]

THE subject of this book is not exactly indicated by the title, which is somewhat too narrow. The industrial worker, whether in town or country, and the miner constitute the main interests, but there are chapters also on the new industrial system and the new class of industrial capitalists.

The views of the authors may be stated in their own words: "the Industrial Revolution found England in the hands of an oligarchy, and of an oligarchy so free from misgiving about its capacity for government, that it resented even the smallest abatement of its control. The new industry increased human power to a remarkable degree, and it seemed to this oligarchy the most natural thing in the world that the economic should resemble the political structure, and that in the mill, as in the State, all this power should be concentrated in the hands of a few men, who were to act and think for the rest."

"The French Revolution has divided the people of France less than the Industrial Revolution has divided the people of England. For behind all the catastrophes and convulsions that seemed to the English upper classes the sum of the French Revolution, there was a constant and living inspiration, the sense for citizenship; whereas the Industrial Revolution, that seemed to represent peaceful and constructive progress, inspired the separatist notion that the mass of men, women, and children were not the citizens of to-day or the citizens of to-morrow, but merely part of the machinery that the great industry plied and handled."

[1] The Town Labourer, 1760-1832: The New Civilisation. By J. L. Hammond and Barbara Hammond. New York and London, 1917. Longmans, Green and Co. Pp. 335. Price, $3.50.

There are chapters on political and economic conditions, economic theory, and religion; but the most significant from the authors' point of view deal with the employment of children, the ambition and efforts of the workers, and their repression. Economic organization, economic theory, political system, religion itself, all conspired to keep down the standard of living of the poor. This was "the new civilisation."

The explanation of the part played by religion is interesting. Resignation to a servile standard was its message to the poor. Even Methodism was "unfavorable" to the workers, but its energetic preaching must "have made many men better citizens, and some even better rebels."

The authors had three avenues of approach to their subject. The genetic would have given them a background, an insight into earlier economic conditions, which would have somewhat altered their view of the effects of the introduction of the factory system. The comparative approach might have taught them that many of the evils of the new system were due to the changes involved rather than to the system itself. Neither of these was chosen, however, for the authors preferred to make a cross-sectional examination of certain phenomena under a microscope which showed neither life history nor general development.

We might expect that with such a plan the authors would go a long distance towards exhausting the available sources of information. Indeed this is one of the excuses for such a restricted field of operation. The preface tells us that "new and important material" from the Home Office has been utilized. This manuscript material illustrates the well known general hostility of the government to the working-class movement and the particular activities of the Home Office in enforcing the law against combination. The new evidence, however, is found in only six out of the sixteen chapters, and it supplies new details rather than new kinds of information. Little that is new, indeed, in kind of evidence, argument, or conclusion, will be found in the book. Con-

temporary institutions and theories are set forth in the familiar way.

It is a little difficult to understand how the authors failed to mention the work of Dicey and Gonner. From the latter they might have learned both fact and method. With quantitative evidence they have little to do. They prefer to assert rather than to weigh. Contemporary opinion is accepted without reserve.

The lament over the introduction of factory discipline is a familiar one. Such outcry we hear made today against the scientific management of labor. The increase in production involved in these new systems is forgotten in the unequal distribution of the products. It is an old argument that the political system prevented combination, that the lack of combination kept down wages, and that therefore in order to gain a living men were forced to send out to work their wives and their children. Really these had been forced to work before under the domestic system. The industrial revolution took them out of their homes to work in the machine-run factories. This fact the authors note, altho they do not allow for it in their argument. There is as little historical perspective in this book as there is balance of judgment.

Not the logic of the book, for a glance at the table of contents shows a strange lack of sequence of cause and effect, but the style attracts the reader. The eloquent enthusiasm of the authors breeds contagion. Subjects such as capitalism, laissez-faire, Blackstonian optimism, labor unions, are translated into human values. A certain ballad-like refrain adds to the conviction. Years ago it was " taxin' the people's bread "; now it is " enslavin' the masses."

It is just the insistence on this great social wrong that gives the book its anchor. Nominally an historical treatise, it is really a theme book for the social reconstruction of England after the present war. From the ironical use of the phrase " the new civilisation " in the title to the last sentence in the book, we see indication that the work is intended to make rather than to record history. It is not an objective study of history but the record of a personal experience: a journey

through the inferno of the industrial revolution guided by the spirit of social reform.

In spite of its faults, this book deserves a place in every library. All will read it with interest; many with profit. No student can afford to ignore it.

N. S. B. Gras.

Clark College
Worcester, Mass.

A THEORY OF INTEREST[1]

The author's solicitude lest mistaken ideas of interest may lead to mischievous legislation and ultimately to the undermining of the economic foundations of civilization is a sufficient excuse for this book. The problem of interest is the crux of almost every program of fundamental social reform. If interest is a payment which is necessary to induce a sufficient number of men to perform a necessary economic function, and to perform it as well as it needs to be performed, there is no justification for socialism or socialists. If it is not necessary to the securing of that result, there is no excuse for anything but socialism or for any but socialists. It is not likely, therefore, that too much attention will ever be paid to the interest problem, or that too many really serious books will be written upon it.

Whatever the author may call himself, it is pretty clear that he belongs to the equilibrist school of theorists. He brings his theory of interest under the theory of normal price, which is essentially a theory of the equilibrium of supply and demand. A normal price is one which will induce sellers to sell as much as buyers are willing to buy and no more. The function of price is therefore not simply to induce production, for some production would take place even if there were no price to be secured. Trout are sometimes given away by strenuous fishermen, flowers by zealous gardeners, and eggs

[1] By Clarence Gilbert Hoag, A.M. New York, The Macmillan Company, 1914.

by enthusiastic poultrymen. But in order to induce a larger supply than would be produced for other reasons a price is ordinarily offered for these things. The function of price is, therefore, to induce a sufficient supply to balance the demand. Interest, as the price which is paid for whatever it is that the capitalist does, has as its peculiar function the inducing of a sufficient quantity of that service or whatever it is. If there were enough capital, or enough of whatever it is for which the capitalist is paid, there would be no price paid for it. So long as there is less of it than is demanded, interest will have to be paid in order to induce more of it, or to increase the supply sufficiently to balance the effective demand.

But what is it that the capitalist does ? The author does not call it a service but rather " the postponement of the consumption of a good or a service " (p. 47). " It is to be noticed that what is really advanced in any case is earlier services for later services " (p. 51). It occurs to the reviewer that it may be a service to exchange an earlier for a later service.

So far as the essential features of the author's theory are concerned they do not differ from those of any of a dozen or so of the recent writers on that subject. The differences are sometimes verbal and sometimes material, but even the material differences are of minor importance. No sound writer doubts that capital is a good thing for the individual or for society to have, tho some, including our author, forbid the use of the word " productive " to describe that fact. No one doubts that saving, or the postponement of consumption, if carried far enough, may occasion some sacrifice, tho some, not including our author, deny that this has any connection with the question of interest.

The author shows that he has read widely in recent writings on interest, but in some cases he does not show the least comprehension of what the writers were driving at, and in others he misses some of their most important points. So far as his own theory is concerned it seems sound and well reasoned. His illustrations are generally new and original. Herein lies, in the opinion of the reviewer, the chief merit of

the book. The theory of interest is, in spite of all efforts at simplification, a difficult subject. It is important that it be expounded in every possible way and that a great many ingenious illustrations be used to make it clear. So long as it remains a well reasoned philosophy, we are not likely to have too many books on the subject, nor too many new methods of exposition tried out.

T. N. CARVER.

HARVARD UNIVERSITY.

BARKER'S PUBLIC UTILITY RATES

ECONOMISTS and engineers have been so absorbed with the question of the valuation of public utility properties, that they have failed to give to the problem of making specific rates (with the possible exception of railroad rates) the attention which it properly deserves. Therefore Barker's "Public Utility Rates" [1] is a welcome addition to the literature on public utilities, for it directs its attention primarily to the formulation of specific rate schedules for each of the various utilities.

The author presents a broad survey of the problem of rates for the various utility services, free from the obscuring details and variations which arise in individual cases. An "attempt has been made to keep the pages understandable to men not technically trained" — an attempt in which Mr. Barker has succeeded fairly well. In order to accomplish this purpose, those chapters which deal with the rates of a particular utility open with a review of its history, growth, and development, which is followed by a brief description of the technology of the industry. These sections are particularly valuable, because they present in brief compass those his-

[1] Public Utility Rates, A Discussion of the Principles and Practice Underlying Charges for Water, Gas, Electricity, Communication and Transportation Services. By Harry Barker, B.S. New York, The McGraw-Hill Book Company, 1917.

torical and technological facts which must be understood if rates are to be properly made. Then follows a description of typical rate schedules in operation in various places, together with the author's constructive suggestions as to the proper basis for rates for that utility.

The first four chapters are given over to introductory material, some definitions of rates and services, and a consideration of various bases for rates. A public utility is defined as "a concern having special rights to use public property (like highways) and serving the general public" when its service "has become a necessity in the conduct of business and ordinary life of the many." Such utilities are divided into two classes: (1) those which store and handle a product, and (2) those which perform a service. In the first class are water and gas companies, and perhaps "eventually furnishers of domestic supplies like ice, coal, and milk." (It is difficult to reconcile this last statement with the previous definition, since such projects receive no special privilege from the public). In the second class are electricity-supply concerns, telegraph and telephone companies, steam and electric transportation lines, express companies, and the postal service. The author regards this grouping as an important one, in rate making. For the manufacturing plants of the first group of utilities may work under conditions of "maximum efficiency," that is, up to capacity, and continuously. But utilities in the second group must provide the service *when* it is being used. Therefore light and discontinuous operation of the plant is necessitated, requiring heavy fixed charges on idle investment. He holds that it is easier to test the reasonableness of rates of a utility making a storable product than of one performing a service. This may be true, but it is significant to note that more has been done in developing scientific theories of railroad and electrical rates than of water and gas rates.

In general, the author's position is, that in spite of other matters which may exert an important influence on rates, the prices charged should be studied in their relation to cost of service. Cost of service is regarded as the logical basis for the formulation of rates. A rate based upon cost may be

accomplished by a two- or three-factor rate base, providing for the apportionment of fixed charges over customers in proportion to their possible demand, the assignment of operating charges in proportion to their consumption, and the distribution of customer charges equally. Or it may be accom plished by a grouping of customers. General experience, we are told, indicates that usually the business can be grouped into a few classes, wherein the maximum and minimum costs of unit service vary but slightly. The most satisfactory rate system is generally one which rests upon a classification of customers, giving to each a rate that would be " fair to the average customer of a class having wants similar to his." Under this plan, the two- or three-factor basis, while forming the foundation of rates, is expressed in simpler terms. The aggregate fixed charges, operating costs, and customer expenses required to serve a group are divided by the quantity of service taken by the group, and we obtain " a unit price which it is generally fair to impose on all the members of the group." Generally speaking, the author seems to prefer the latter method, on account of its greater simplicity to the mind of the consumer. Simplicity in the rate schedule he regards as usually more important than rigid adherence to individual rates, even though these might be wholly logical and completely accurate.

Chapters V to IX comprise a statement of the generally accepted principles of valuation, reasonable return, and depreciation. Chapter X, on railroad rates, is confined to a statement of the factors and problems involved in railroad rates and classifications — joint costs, value of the commodity, cost of service, risk, competition of water carriers, etc. Chapter XI, on express rates, describes the old express rate system, which prevailed up to 1914, together with the new rate system introduced by the Interstate Commerce Commission in that year. Both of the latter chapters are purely descriptive and make no contribution to the theories of railroad or express rate making. But they are valuable as statements, comprehensive in scope but brief in compass, of past and existing practices.

Chapter XII, on " Rate Problems of Street and Interurban Railway Transportation " describes the departures made in the United States from the flat five cent fare system, such as the Cleveland plan and the Milwaukee zone system. The cost of service principle, contrary to general assumption, is regarded as being applicable to street railway service. Mr. Barker proposes, first, a separation between fixed and operating costs. The total fixed costs would then be divided by the total number of passengers which the system is expected to carry without more equipment. This gives the minimum fare to be collected from every passenger, as a " readiness to serve " charge. There would also be collected from the passenger an additional amount, to cover operating costs, expressed as an average cost per passenger mile. This would represent the addition to the minimum fare to be collected for each unit of length — or zone — traveled. In view of the present rising costs of electric traction companies and the apparent necessity, in some cases, for increased revenues, the proposal to establish zone fares, based approximately upon cost of service, is at least worthy of serious consideration.

Chapter XIII deals with water rates. The problem is the distribution of costs between the city, chiefly for fire protection, and the various classes of private users. The author again adheres to the cost theory, maintaining that the city should pay for fire protection, in the form of " hydrant rentals " or otherwise, a return on the difference in the value of the plant as it exists and as it would be if no fire protection were given. This contention, obviously, rests upon the assumption that domestic water supply is the primary purpose of the system, and that fire protection is purely incidental, an assumption which in some cases may be open to challenge. The most equitable rate for private users is held to consist of (I) a minimum or service charge, sufficient to provide (*a*) a return upon the investment in service connection and meters, (*b*) the average cost of metering and billing, and (*c*) the average cost of unregistered water (found to be 27 per cent of the total output in 29 New England systems); (II) an additional unit price for water registered on the meter.

But, for simplicity, the service charge required from consumers may well be a minimum charge or guarantee, covering also the first block of water used Then additional water consumed would be charged for at a lower rate, since it would not be burdened with the service-expense items.

Chapter XIV, on gas rates, considers the schedules for both artificial and natural gas. Mr. Barker criticizes (and rightly) the requirements under which many gas companies are compelled to operate, which regulate the candle power of the gas, and urges the substitution of the heating-power test. He condemns the flat rate which still persists in many sections, and urges the substitution of the cost principle. This is to be accomplished by separation of costs into fixed, customer, and operating; the fixed and customer charges to be spread over the first one, two, or three thousand cubic feet consumed (depending on the size of the meter), followed by a much lower rate to cover operating costs for all excess consumption. Attention is called to the importance of the peak load in natural gas, as contrasted with artificial gas. In the former there are no manufacturing plants and holders, but the distributing plant must be ample for peak-load demands. Therefore, the rates should vary as markedly with hours of use, as in electric service.

Both the chapter on gas rates and on water rates are accompanied by tables showing comparative water and gas rates in American cities.

Chapter XV, on electric rates, indicates the multiplicity of special problems encountered in making electric rates, and holds that "a simple classification into size classes, with various unit prices for each, ordinarily is not sufficient to attain all the desired ends." It is to be regretted that the author, although he describes many different types of electric rate schedules, does not indicate with clearness the kind which he would favor. But apparently it is one which would recognize the consumer's demand or connected load, the time of use, and the amount of current consumed. However, rates for street and park lighting, it is held, may properly be flat rates, since the power requirements and hours of use can be accurately known in advance.

The concluding chapter on telephone rates calls attention to some of the peculiarities of the telephone industry as they affect costs. Among these are the rapid increase in unit telephone investment with the increase in the size of the exchange, and also the great increase in plant investment caused by peak loads. The author is somewhat skeptical of costs, as a basis for rates, in the telephone industry. He believes that here cost "can not be as reliable as a basis for rates, as the service costs which may be deduced for water, gas and electric utilities," and that the expenses of a telephone exchange can be directly allocated on the several classes of customers less readily than can be done in the case of most other (non-transportation) utilities. This is because of the complexities of the industry and the inter-class participation in the use of much of the equipment. Therefore he is inclined to look with favor upon the use, by the telephone industry, of a rate basis approaching " value of service," not in the sense of "all the traffic will bear " but rather as meaning the " total expense of a company apportioned over towns, cities and classes of subscribers in proportion to the *relative* worths of the services, and the *relative* abilities to pay."

The book contains much data difficult of access to the layman. Viewed as a compilation of information regarding the trend of public sentiment and the attitude of regulating bodies on rate making, and as a presentation of the most important economic and engineering problems in the establishment of rate schedules for the various utilities, it is an extremely valuable volume. On many rate matters, it does not say the final word. But it provides a careful discussion of those factors which call for judicious consideration in each individual case. It will contribute much towards making our rate regulation less haphazard in the future. Not all of its reasoning is unassailable, but diverging ideas are presented with fairness. The volume will meet a real need.

Ralph E. Heilman.

Northwestern University.

BOOKS RECEIVED

Adams, H. C. Description of Industry: An Introduction to Economics. New York: Henry Holt & Co. 1918. pp. 270. $1.25.
Agger, E. E. Organized Banking. New York: Henry Holt & Co. 1918. pp. 384. $3.00.
American Sociological Society, Publications of Social Control. Chicago: University of Chicago Press. 1918. pp. 269. $1.50. Vol. XII.
Azan, Paul. The Warfare of Today. Boston: Houghton Mifflin Co. 1918. pp. 352. $2.50.
The Casualty Actuarial and Statistical Society of America. Proceedings October and November, 1917. New York: Casualty Actuarial & Statistical Society. 1918. pp. 247. Vol. IV, Part I, No. 9.
Conklin, John A. Income and Federal Tax Reports. New York: Prentice-Hall. 1918. pp. 704. $3.00.
Curtis, E. N. The French Assembly of 1848 and American Constitutional Doctrines. New York: Longmans, Green & Co. 1918. pp. 357. $3.00. (Columbia University Studies, Vol. LXXIX, No. 2.)
Fisher, Irving. Recherches mathématiques sur la théorie de la valeur et des prix (translated). Paris: M. Giard & E. Brière. 1918. pp. 305. *5fr.* (Translated by Jacques Moret.)
France, Banque de. Assemblée générale des actionnaires de la banque de france du 31 janvier 1918. Paris: Paul Dupont. 1918. pp. 90.
Garino-Canina, Attilio. Intorno al concetto di Industria Naturale nella Letteratura Economica. Torino: Fratelli Bocca. 1918. pp. 53.
Garino-Canina, Attilio. La speculasione a termine nelle borse dei prodotti agricoli e le recenti esperienze del commercio granario. Rome: Athenaeum. Rome. pp. 42.
Gray, H. L. War Time Control of Industry: The Experience of England. New York: Macmillan. 1918. pp. 307. $1.75.
Henderschott, F. C. and Weakly, F. E. The Employment Department and Employee Relations. Chicago: La Salle Extension University. 1918. pp. 60. (One of a Series of Lectures in a Systematic Course.)
Kastor, E. H. Advertising. Chicago: La Salle Extension University. 1918. pp. 317.
Kidd, Benjamin. The Science of Power. New York: G. P. Putnam's Sons. 1918. pp. 318. $1.50. (With an Introduction by Franklin H. Giddings.)
Laughlin, J. Laurence. Credit of the Nations: A Study of the European War. New York: Charles Scribner's Sons. 1918. pp. 406. $3.50.
Meriam, Lewis. Principles Governing the Retirement of Public Employees. New York: D. Appleton & Co. 1918. pp. 477. $2.75.
Morimoto, Kokichi. The Standard of Living in Japan. Baltimore: Johns Hopkins Press. 1918. pp. 150. (John Hopkins University Studies, Series XXXVI, No. 1.)
Ohio, Industrial Commission of. Preliminary Survey of Labor Camps in Ohio. Columbus: F. J. Heer Printing Co. 1918. pp. 22.

Ohio, Industrial Commission of. Statistics of Mines and Quarries in Ohio. Columbus: F. J. Heer Printing Co. 1918. pp. 84.

Ohio, Industrial Commission of. Union Scale of Wages and Hours of Labor in Ohio on May 15, 1917. Columbus: F. J. Heer Printing Co. 1918. pp. 44.

Pierce, P. S. Social Surveys of Three Rural Townships in Iowa. Iowa City: University of Iowa. 1918. pp. 88. (University of Iowa Monographs.)

Schlesinger, A. M. The Colonial Merchants and the American Revolution, 1763–1776. New York: Longmans, Green & Co. 1918. pp. 647. $4.00. (Columbia University Studies, Vol. LXXVIII.)

Seligman, E. R. A., Durand, E. D. & others. Financial Mobilization for War. Chicago: University of Chicago Press. 1918. pp. 157. $0.55. (Papers presented at a joint conference of the Western Economic Society and the City Club of Chicago, June 21 and 22, 1917.)

Stephenson, George M. The Political History of the Public Lands from 1840 to 1862. Boston: Richard G. Badger. 1918. pp. 296. $2.50.

Swiss Bank Corporation. Financial and Commercial Review 1917. London: Swiss Bank Corporation. 1918. pp. 60.

Thomas, W. I. and Znamecki, F. The Polish Peasant in Europe and America, Vol. I and Vol. II. Chicago: University of Chicago Press. 1918. pp. 526, 589. $5.50.

Todd, A. J. Theories of Social Progress: A Critical Study of the Attempts to Formulate the Conditions of Human Advance. New York: The Macmillan Co. 1918. pp. 579. $2.25.

Trachtenberg, Alexander (Editor). The American Labor Year Book, 1917–18. New York: Rand School of Social Service. 1918. pp. 383. $0.60.

Tufts, James H. The Real Business of Living. New York: Henry Holt & Co. 1918. pp. 476. $1.50.

U. S. Federal Reserve Board. Index-Digest of the Federal Reserve Act and Amendments. Washington: Government Printing Office. 1918. pp. 656. $1.00. (Second Edition.)

Waton, Harry. The Fetishism of Liberty. New York: The Marxian Philosophical Society. 1918. pp. 101.

[illegible] Journal of [illegible] pp. 64.
[illegible] of Wages and Hours of [illegible]
[illegible] pp. 66.
[illegible] University of Iowa, [illegible] University of Iowa [illegible]
[illegible] and the American Revolution [illegible]
[illegible]